

NOVEMBER

25¢

NEEDLE ME NOT By GUY ARCHETTE

fantastic

ANC

ADVENTURES



Strange seeds were sown from the sky to become

THE DRAGON ARMY by WILLIAM MORRISON

MEN BEHIND *fantastic* ADVENTURES



Guy Archette

ALL THROUGH college I was editor of the Yearbook. My job was to write short biographies of the graduating students. The second job I held after leaving college was as one of the editors on a who's-who encyclopedia, where I wrote the biographies of all cello players whose last names started with W, X, Y, or Z. All these life stories I was able to dash off with ease. So I'm chagrined to find that when the editor of a magazine for which I've written over a million words asks me for an autobiography, I don't know where to begin.

I'm 51 years old, married, and should be a grandfather by the time this is in print. I love children and animals, but have met a few adults I could do without. I wanted to be a fireman when I was six—a boxer when I was 12. In my third year of high school, I almost failed my Eng-

(continued on third cover)

The Beast that Ravaged a million Women

AND MADE A BEDROOM AS WELL AS A BATTLEFIELD
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whole world
to see and
shudder
at!



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At the crux of his career, Hitler sickened with a mysterious malady. The Reich's best doctors agreed that only psychiatrist Kurt Krueger could help him. The sick man did not believe in psychoanalysis, and let Dr. Krueger come to him only when told that it was his sole chance for recovery.

After a cursory examination, Krueger gave his decision: "I'll try to cure you," he said, "if you'll answer truthfully all questions I ask you. They'll involve your most private acts and thoughts." Hitler resisted, but the doctor was quite firm and had his way. The book

"I WAS HITLER'S DOCTOR"

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Writing with the passion for truth and fact-finding of the scientist, Dr. Krueger takes his patient back to his childhood love of his young mother and hate of his aging father, his early degradations, his relations with the town idiot, and his attitude towards his sisters—especially the wayward one he never mentioned to anyone else.

He brings out Hitler's young girl fixation, his own of chaotic girl fantasy, and shows why he married only when it could not be expected of him to consummate his marriage.

Such records are usually sealed in secret files for professional reference only. But as he continued to treat his monstrous patient, three things dawned on Dr. Krueger:

1. His life was in danger. 2. The world's life was in danger. 3. The public safety comes before medical ethics.

Dr. Krueger's escape to America and the publication of his book followed as matters of course.

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has ever so taken hold of the mind of the average reader before whose eyes—as he makes his way through those fires—history suddenly comes to life!

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"Hitler flows into the madness of this age and

THE MADNESS OF THIS AGE

flows into Hitler," writes Dr. Arvin Enlind of the U. S. Army Medical Reserve in one of the book's three revealing introductions.

The other two introductions are by Otto Strasser who knew both Hitler and his doctor, and world-famous novelist and critic Upton Sinclair.

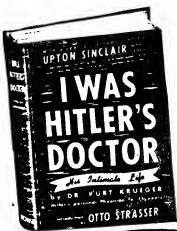
UPTON SINCLAIR: "I take the liberty of telling book critics and readers that this volume is one of great importance to our time, it deserves to be read and studied by every adult man and woman in the Western hemisphere."

N. Y. POST: "As a shocking document it certainly can claim parity with *The Confessions of St. Anthony*."

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NOVEMBER, 1952

Reg. U. S. Pat. Off.

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All Stories Complete

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DRAGON ARMY (Novel—28,000) by William Morrison 8

Illustrated by Dick Francis

No man can tell the result when he calls the forces of evil to aid him,
because evil comes groveling like a servant and becomes master in the end

IT HAPPENED TOMORROW (Short—4,500) by E. Leslie Stewart 54

Illustrated by Nobu Shimotsuka

If you ever see a pitchman with a long tail selling Piper's Solution on
a street corner, don't buy any. He will want your immortal soul as the price

WHEN BETTER BUDGIES ARE BUILT (Novelette—9,000) by Bryce Walton 66

Illustrated by William Slade

Would you like to turn all your troubles over to a Big Brain? Would you like
all your problems solved? Buy a Budgie. They'll be ready in the year 2035!

NEEDLE ME NOT (Short—3,500) by Guy Archette 86

Illustrated by Ed Emsler

Sam was a tailor—and a nice little guy with but one failing: he just couldn't
make the pants short enough. So he went to Mars—and you take it from there

I'LL FOLLOW YOU TO HELL (Novelette—10,000) by Wm. P. McGivern 94

Illustrated by Dick Francis

Ryan was part copper—part bulldog. He followed the man with the silver
hair right into hell itself. Or had the man been leading Ryan all the time?

THE MAN WHO COULD NOT DIE (Novelette—8,000) ... by E. K. Jarvis 112

Illustrated by Dick Francis

A revolution on Mars would be fatal to Terra. We could not live without the
life-giving force from that planet. But how do you lick a guy bigger than you?

Front Cover by Robert Gibson Jones

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The Editor's Notebook

A CONFIDENTIAL CHAT WITH THE EDITOR

WE celebrated a big event this weekend—the advent of our four-pound eight-ounce niece. A brand new baby—just coming onto the scene of things. It gave us quite a start to realize that by the time little Ilene Hilary Schatz will be old enough to vote in the November presidential elections, we'll be quite doddering. But so the cycle goes.

Our world will be more outdated to Ilene than that of her grandparents is to her parents. Science is moving faster—the boundaries of our world are expanding. Grandpa took the train thirty years ago, and marveled at the speed with which he could travel. And it *was* fast—compared to the highest speed on the covered-wagon speedometer.

Yet *we* haven't been on a train for years. Too slow. Today we can make the Los Angeles-New York air run in ten hours. Via jet, it takes five hours. But in thirty years there may well be an entirely new vehicle which will cut this trip to one hour.

Welcome, Ilene. You'll find Life exciting and beautiful—boring and ugly—full of happiness and filled with heartbreak—challenging and hopeful—frightening and hopeless. But always know that you take out of it—largely—what you put in. So make the most of living, Ilene. It's a wonderful world.

IT was a beautiful sunshiny day when we started out yesterday morning. So we decided to take advantage of a long-standing invitation to Fire Island. This is a colorful summer colony off the south shore coast of Long Island. It's famed for its beaches, which are beautiful, and its residents, who are mostly famous artists and writers and musicians.

As a science-fiction editor, we get quite a kick out of the fact that Fire Island inhabitants are, so far, holding out against the encroachments of civilization. Nowhere on Fire Island are automobiles allowed, and only in some sections do they sanction bicycles. To get many places on this thirty-mile-long island, you either walk or are pulled along in a kiddie-car "station wagon".

Anyway, on this beautiful Sunday, we drove two hours to reach Bay Shore, parked the car, and were just about to set foot on the boat which ferries passengers across to the island, when the *rains* came. And believe us, the New York rainy season does not take a back seat to the Indian monsoon period.

Never having been adrift on anything more turbulent than a park lagoon, we eyed with some trepidation the huge waves crashing over the pier, and the foaming whitecaps. Fortunately, before our bravery could be challenged, we were informed that the ferry would sit out the storm.

With an outward show of slight contempt for boats giving in to weather conditions—and an inward feeling of relief at not having to test our own durability—we got back in the car and drove out to Sheephead—where we buried our disappointment by devouring a beautiful huge lobster. You know, of course, that the day wound up hot and sunny. But by then we were watching our favorite TV program in our Manhattan living room.

What's all this got to do with science fiction? We're not sure ourselves. But it's in a stiff column, so it must belong there someplace.LES

OPTICS- CRUDEST SCIENCE

By Lee Owen

IN ADDITION to being the crudest science, optics is also the most accurate! How this paradox arises is easy to understand when you consider two optical techniques which are used to provide fundamentally all the standards of measurement on Earth. They are the famed Foucault knife-edge test, and the principle of diffraction. Both techniques use the simplest of equipment—and yet they are accurate to fractional millionths of an inch!

The Foucault knife-edge test is simply a process for determining how spherical a mirror has been ground. By placing a pin-point of light and a razor blade at the focal length of a spherical mirror to be tested, then examining the surface of the mirror with the eye also located just behind the focal length, an astonishingly simple fact is noted. When the mirror is spherical to within a fractional wavelength of light, that is, to within a fractional millionth of an inch, the mirror surface appears uniformly illuminated. When there is the slightest imperfection, say, a bump caused by touching the glass with a warm hand, a matter of a millionth of an inch, that bump is magnified to the eye so as to appear like a mountain. That's all there is to it.

In the Newton ring diffraction method, when two flat pieces of glass are placed one over the other, if they are truly flat to within the previously mentioned optical limits, a series of concentric rings can be seen. The slightest imperfection changes the concentricity of these rings. Immediately you know you do not have perfect flatness.

The future clearly points to finer and finer accuracy. Where today ten thousandths of an inch are used in industry, tomorrow will see the substitution and necessity of hundred-thousandths of an inch. And after that millionths. In other words, accuracy is at a premium. For those with a speculative turn of mind, it appears as if a benevolent Nature has chosen to provide for these conditions by making the referent as simple as possible. Thus, to work to these minute dimensions, all that is needed is some fine abrasive, a light source, and rigid glass. With these simple tools the same work can be done in a jungle as can be done in a laboratory.

Naturally today's and tomorrow's science demand speed as well as accuracy. Substitution of electronic measuring equipment usually takes care of this. But in the final analysis you have to go back to a "crude" optical system for the basic standard.

ULTRASONICS - BIG DEAL!

By

E. Bruce Yaches

REMINISCENT OF the claims of the more familiar detergents, the new science of ultrasonics "does" just about "everything". The use of high-frequency sound in submarine detection is well known, but even more important eventually will be its use in cleaning. Several experimental setups have already been built, looking much like conventional washing machines, and they have proved their ability to dry-clean perfectly even the dirtiest clothing.

The operation of such a cleaner is imperfectly understood, but some idea can be got from considering how it is constructed. A quartz crystal generator, or a magnetic iron bar generator, is driven by an electrical oscillator to vibrate at sonic ranges beyond the audible. These hyper-frequency sound waves are fed to metal plates which vibrate similarly. When dirty clothes are placed between the plates, a violent invisible action occurs which somehow detaches the dirt and grease particles from the cloth—without hurting it—and combines them into lumps which fall clear of the cloth.

The science isn't yet ready for the home laundry, but in certain industrial applications it is proving marvellously successful. Cleansing small metal items, particularly those of a precision nature, of grease, tiny metal particles, etc., is ordinarily difficult, but with sonic techniques it is easy. The parts are put in a regular organic solvent bath and the whole is riddled or permeated with sonic waves. A violent invisible agitation occurs, again, which successfully removes the slightest trace of every contaminant. Above all, no injury is done the parts.

So effective is this technique that numerous manufacturers of precision apparatus are employing it. Eventually the development will be extended to the familiar household cleaning problem. As one hyper-frequency sound engineer put it, "I can see sound used for subs, but cleaning is the last straw. The next thing you know, they'll use it for homogenizing milk!" And he's right—they do!

DRAGON ARMY



By William Morrison



Here was a planet formed out of hatreds as strong as those of the men who invaded it, and where the old stories of Cadmus and his dragon's teeth came true again

FRANK NEWELL was still excited when he heard the beeping of the radio signal at his belt. He put aside the seeds on which he had been working and threw the switch that brought him Bulkley's voice. The man sounded anxious, amusingly so. You might have thought there was real danger. "Newell! You all right?"

Newell tried to keep the excitement

out of his own voice. No use betraying his discovery too soon. No sense in giving Bulkley time to start his crafty mind going, to make plans for a double-cross. He said, "I'm fine. How are you? How are all the relatives?"

"Don't try to be funny, Newell." That crack about the relatives must have hurt, to judge from the savage

anger in the man's tones. It emphasized his isolation, his desperate loneliness. "A minute ago I was feeling sorry for you. Don't make me want to break your neck myself."

"No, that would be dangerous, wouldn't it?"

"That last fall of trees didn't come close to you?"

"I wasn't among the trees. I was in a cleared area."

"You've got more sense than I thought." He could detect the relief in the man's voice. "For a while I thought you might have been caught. I thought I might be—"

"Can't lose me, Bulkley. It's sweet of you to worry, though. How'd you spare the time from watching that dancer on television?"

"Being funny again, Newell? You know that I don't watch television during the day."

"Thought you just sat there and stared at the screen, mooning about her."

"Newell, if you weren't so important to me—"

"Sure, I know how much you think of me. Anyway, my dear friend, I'm alive. Alive and kicking. I'll be back in two hours."

And with something to tell you, he added to himself. Something that'll give you the kind of hope you haven't had in a long time. We're no pals, we hate each other's guts, but all the same we're in this for another three months, at least—if we live that long.

It's a big *if*, he thought, as he turned back to the seeds. This beautiful planet, so quiet and peaceful now, is a death trap. It's a planet where danger lies in wait. That's why Bulkley and I have been exiled here.

He thought back. How long have we been there together? Why, it's no more than six months in all. Imagine that, only six months! It feels

like a lifetime. But six months with Bulkley would be a lifetime anywhere.

The man never fooled me, he reflected with gloomy pride. I hated him from the beginning, although not the way I've come to hate him now. That's because I've come to realize what he's done to me. That night when the truth struck me—that's the time I needed self-control. That was the time when the desire to avenge myself, to kill, surged over me, almost overpowered me. But it would have left me alone here, alone on this damned and beautiful planet.

So I kept my feelings under control and, after a time, they changed. My hatred for Bulkley is deeper now. But it's become a cold, calculating hatred. Some day I'm going to have my revenge. But not yet. Now we have to work together, protect each other as if there were the greatest bond of affection between us. We need each other too much for either of us to let the other die.

BROTHERLY love, he thought. Brotherly love, just like Cain and Abel in the prehistoric story.

Newell began to sort his seeds again. He was a big man in shorts, a thin film of moisture covering his deeply bronzed skin. The pinkish sun was hot overhead, and there was no wind at all. Only the creeping plants in the forest crackled from time to time in response to some inner change in their metabolism.

When he had finished with his seeds, his hands almost dropping some of them in his excitement, it was late, more than time to return to the plastex hut. He put everything in order for the next day's experiments, and set out for home.

The forest was still quiet, but once a slight wind arose, and he had a sensation of danger, and an urge to

run. Don't be a fool, he told himself. There's no danger, nothing to run from. He fought down the sense of panic, and forced himself to walk slowly.

Outside the plastex hut he forced himself to stop. No use letting Bulkley see how fundamentally excited he was. For a long time they had been without hope of escape, and now that one unexpected door away from death had been opened, Bulkley would be in a fever of anticipation. No use letting the man see the eagerness, the hope which filled Newell himself at the thought of what he had discovered.

As he had expected, Bulkley was sitting at the television set, his eyes glued to the screen. A lithe girl, clothed mostly in veils of gauze, twisted and writhed against an exotic purple and gold background. The same girl. This was the kind of educational program Bulkley liked, he told himself with a grim smile. It was a program that specialized in graphic illustration of the anthropology of alien planets, with occasional excursions into the anthropology of the dead past. It combined sex with instruction. A fine program, a fascinating program, a program well calculated to drive a lonely man completely crazy.

Almost incidentally, Newell noted the dancer's face. It was half hidden by the swirling gauze, but he could see that it was wistful and appealing. Bulkley had probably not even noticed it, nor had he noted the name of the program chastely displayed on a glowing placard at the right: EX-TINCT DANCES OF EARTH. Bulkley was too busy watching those lithe movements, anticipating the throwing off of the next veil.

With a feeling of unexpected pleasure, Newell allowed himself to show a small part of the hatred he felt. As the dancing girl whirled with flar-

ing veils, he reached over and turned off the set. The girl faded out.

Silence descended on the hut. The rows of transparent metal utensils hanging on the wall, the clothes, transparent and opaque, neatly arrayed in the closets, the store of precious raw plastex powder in the stock room, the tiny atomic power plant at the side—all were silent. Silent and tense, as if waiting for a thunderbolt to strike from the equally silent sky.

The thunder clouds were forming. A blank look spread over Bulkley's face. Then, as he realized to the full the deliberateness of the act, he leaped to his feet, his hand dropping to his holster. "I'll get you for that, you lousy space-warped fool!"

THE MAN'S rage was destined to be frustrated, and that made it amusing. Newell smiled, and dropped into a seat. "Calm down," he said. "I've got something important to say to you. And you'd be in no condition to appreciate it after watching that program."

"I'll watch what I damn please, you mind-twisted—"

"Easy, Bulkley, or you'll run out of adjectives. And I get tired of hearing you repeat yourself. You know that you don't watch what you please. You watch what the censors let you. And they'd never permit the girl to strip off the last veil."

Bulkley was still cursing, more to himself now than at the other man. Newell stared at him, his own excitement more easily controlled now that he saw what a fool his companion looked like when he was unreasonably excited. And yet, Bulkley was no fool. He was a shrewd, dangerous enemy, and a false and treacherous friend. Physically, he was enormously impressive. Tall, wide-shouldered, with powerful muscles that had been hardened

in his work as engineer on numerous planets, he seemed to dwarf even Newell. He was older than Newell, and—yes, Newell had to admit it—shrewder. Bulkley had been around, he knew how things were done. Newell was a good biochem man, with a special affinity for plants. He could almost sense how a plant felt as it grew—and that seemed absurd, because a plant has no feelings. But Bulkley could sense how *people* felt.

He had control, too, a control and a will as strong, when he wanted to use them, as Newell's own. His hot rage was disappearing now, and as it disappeared, a cold and ugly look formed in his eyes. A cold look in the eyes, a cold smile on the hard face. He said evenly, "One of these days, Newell, I'm going to kill you for pulling a little trick like that."

"Kill me? You should thank me, Bulkley. All you're building up for yourself by watching programs of that sort is frustration. You haven't a chance in the world—any world—of seeing a girl like her in the flesh for a long time. Why tantalize yourself? It only makes your blood pressure worse. And there are no doctors on this planet to treat it."

"You're so kind and thoughtful of my health, Newell, I don't know how to thank you. But I'm going to kill you anyway. I'm warning you now."

"You won't kill me yet, though. We're the only two people on this planet. You need me too much."

"One of these days you might make me forget that I need you."

NEWELL stood up slowly. "I won't tell you my opinion of you, Bulkley," he said. "I'll leave it to you to guess. But I don't want you to think I'm afraid of you. If there were such a thing as a space-devil, I wouldn't be afraid of that

either, not if I hated it as much as I hate you. And another thing I don't want you to imagine is that you've fooled me. Because you haven't, not worth a damn. I know why I'm on this planet. It's because you framed me and had me put here."

"You're having hallucinations, Newell."

"I don't think so. I've been having thoughts. We've been here for about six months now—and I've had time to figure out why I was convicted."

"The why is simple enough. You were caught." There was a contemptuous sneer on the bigger man's face. "They had the evidence against you, just as they had against me. Only the big shot who arranged everything got away."

"The big shot? There was no big shot. It was you who ran everything, you who manufactured the evidence. It's no use trying to laugh that off, Bulkley, because I know the truth. Millions of credits were disappearing, and you were the one responsible for making them disappear. When they got wise to you, you tried to shift the blame to me. That didn't work—not quite, anyway. You couldn't get out of the net of evidence yourself, although you were able to involve me."

"And you were innocent. Too bad."

"I was a simple-minded scientist. Before this happened, I had been entirely absorbed in my work. When the accusations against me were first made, I was too bewildered to know what was happening. It probably wouldn't have made any difference if I had known. The evidence I needed had disappeared. The entire Research Bureau where I worked had been cleaned out. The only way I might have been cleared was by the testimony of the people who were your own pals—the secretary of the Bu-

reau, his assistant, and the others."

"Imagination, Newell. These people were no pals of mine. Especially after they disappeared, and couldn't be located again."

"Could the reason for that be, my friend, that you dipped your hands in a little murder?"

Bulkley's face flushed suddenly at the question as a wave of blood swept up from the neckline. But he didn't lose his temper again. He was icy now, icy and more dangerous.

"It could be—" he said slowly, "—if that's the kind of imagination you have."

"It is." Newell laughed harshly. "You have no idea. Bulkley, how close *you* were to death the night you confessed."

"I confessed?"

"You were talking and cursing in your sleep. I guess that the loneliness here was getting you, I heard you through the walls. I opened the door of your room and listened."

"And you didn't say anything in the morning?"

"I didn't trust myself to speak to you. That was the morning I got up early and hurried to work before you awoke."

Bulkley said slowly, "I remember that you did act strange for a time. I thought that the loneliness was getting you."

"Not loneliness. The urge to murder. Yes, Bulkley, it's catching. I think the chief reason I didn't kill you—"

"The same reason I let you live. We need each other too much."

NEWELL nodded. "To keep our sanity, if for no other reason. They put us together on this planet, out of the way of the great galactic routes, with no hope of returning to civilization. I don't know

whether they figured we hated each other or not. At any rate, it was a clever method of punishment to leave us here together."

He stared through the clear plastex window. "As pretty a little planet as you'd want to see. Food for the taking, and clear sweet water in every brook. Not an animal in the place, so they didn't leave us weapons. But they were kind to us, so far as kindness can be consistent with the cruelty of punishment. They left us books, a television receiver, a supply of raw material for plastex, and a stock of drugs in case of dangerous virus or bacterial disease. They wanted us to stay alive as long as possible—until one of those little accidents happened."

He was silent for a moment, as both he and Bulkley thought of the accident they had recently so narrowly escaped. Long streamers from the pink sun, a violent windstorm, the giant trees snapping and striking out in all directions—death had been very close that night. It would be close again the next time the winds rose, and it would never cease threatening from the earthquakes, the damnable earthquakes that had eventually destroyed every colony that had been started here. Sooner or later, the earthquakes would engulf them.

Not yet, however. And possibly, not at all, if his new hopes were justified.

Bulkley said, "Is this what you wanted to tell me?"

"No. This is merely something I want to get off my chest, so that we can have things straight, and understand each other. The fact is that I've stumbled on something that may be important enough to get us off this planet."

He could see the spark of light that sprang into Bulkley's eyes. There

was new hope there—new hope, and new danger.

"What is it, Newell?"

"Before I tell you, I want to know how far you've gone with that equipment you've been working on, from the old buried wreck we found in the forest."

The man's eyes became hooded, evasive. "Not very far. The space ship was an obsolete type, and the equipment wasn't of much use."

"Then there's no use in my telling you what I found."

"What do you mean by that?" demanded Bulkley.

"We can't get off here unless we can communicate with the nearest space outpost. And if you haven't been able to construct a long-range radio transmitter—"

THE EYES shifted, prepared to look candid and truthful. "I haven't been working on it very hard. I might get the thing done if there was a good reason for it."

You're lying, thought Newell. Most probably you've got the radio transmitter already made, and you're trying to keep its existence to yourself. Now that you see a chance of getting out of here, you feel that your need for me is less. I know you're a killer, I know that I'm dangerous to you, too dangerous to be allowed to live. Well, I'm not going to tell you much now, old friend. I'm not going to tell you so much that you'll feel you can afford to kill me, and go it alone.

He said, "There's a good reason. But I'm keeping it to myself until I see that transmitter."

Bulkley stared at him, hatred radiating from the big body. "So after coming in here and turning that show off, and building up my hopes, you've got nothing to tell me."

"Nothing, until I see that transmit-

ter. I don't trust you, Bulkley. It's never good policy to trust murderers."

The hatred in the room seemed ready to crystallize, to take tangible form. But Bulkley merely said with contempt, "You'll see the transmitter tomorrow. And what you have to say had better be good."

"It will be good enough." Newell switched on the television set. An ancient man's withered face sprang into being on the screen, and a droning voice began to fill the air with details of linguistic differences between races of different galaxies. This was educational, and no mistake about it. "Here's your program, Bulkley. Only, this old bird isn't removing any veils."

Bulkley reached a heavy hand toward the set, and once more the picture on the screen faded. The hatred in the room continued to hang there, thick and heavy.

They ate in silence, and when the meal was over, Newell went into his own room, closed the door; and quietly arranged the booby trap he had prepared. He knew that Bulkley would not try to kill him yet, not until he had learned what the discovery was. But there was nothing to prevent Bulkley from knocking him out, tying him up, and then torturing him in an effort to get the secret. Nothing but his own ingenuity.

He slept well, too well. In the middle of the night he was awakened by the hoarse scream of a man in terror.

THE BOOBY trap had worked.

He flashed on the light. On the floor was a gun and a length of rope. Standing in the doorway was Bulkley, writhing desperately in the grip of long brown arms that hugged his neck with deadly affection, tightened around his body, twisted around his legs. The arms were attached to

no body of their own. They hung loose in the air, like the snakes which on this planet did not exist.

It was not good to see a man so terrified, even a man like Bulkley, whose intentions were so obviously murderous. Newell felt a little sick at the sight.

The arms around the neck twisted tighter, and the screams became hoarser and more strangled. Newell realized that in another minute the man would lose consciousness.

He pressed the button of one of his research flashlights. A strong invisible pencil of infrared lanced out at the brown arms. They froze into immobility.

He said quietly, "They won't get any tighter, Bulkley. Not unless you start them up again by trying to escape."

The other man was deadly still. Not a muscle seemed to move, although he could not keep an artery in his neck from twitching, and his sweat glands were overstimulated by fear. His face glistened in the dim light like the surface of a sheet of water.

Newell said with contempt, "I thought you'd try to do that. You probably caught the others asleep too. It's too bad for you that my own ropes were a little more alert than yours."

Terror found a voice. Bulkley said hoarsely, "Let me out of these damned things."

"No, my friend. I don't trust you out of them. They're one of the native plants I've been working with for the past few months. Ordinarily they're harmless, but I've learned how to control them, and to defend myself with them. And I'm defending myself now."

Bulkley stammered, "Let me out. I can't breathe."

"That's hardly something for me to worry about. However, I will loos-

en them a bit. But I don't intend to remove them, Bulkley. From now on, they stay on you, day and night, until you're no longer in a position to harm me. You may be glad to know that they respond to sudden motions, and if you try any more of your tricks, they'll strangle you for good."

"I won't try anything. Just let me out!"

Newell altered the wave-length emitted in the light pencil, and gave the brown arms a carefully regulated dose of the differently colored infrared. The arms seemed to relax slightly and he heard the long gasping intake of breath from the other man.

"That should let you move around more freely. Now, I think, we'd better get some more sleep."

The man staggered out toward his own room. Newell lay down on his bed again, and this time he slept till morning.

THE PLANET had an approximately twenty-five-hour day, and the nights during the present season were long. When he finally arose, Newell felt rested and pleased with himself. He could hardly say as much for his fellow exile, who was still wearing his animate chains.

Newell ate a hearty meal but, naturally enough, Bulkley had no appetite. His throat was sore from the experience of the night, and his voice was hoarse as he pleaded, "Take these things off me, Newell, and I swear I won't try to kill you again."

Newell laughed without amusement. "Let's not talk nonsense," he said contemptuously. "They're my guarantee against murder." He added, with an air of assurance that Bulkley could not know was false, "Kill me, and you'll never get out. You'll rot with those things around your neck. Now, I'd like to see that radio transmitter."

As he had expected, it was in the ruins of the old space ship. Even handicapped as Bulkley was by the brown plant arms around his neck, it took the man only a few minutes to fit the parts together.

Newell stared at the array of tubes and transistors, at the plute-powered electric generator. "Power plant too weak for twenty-four-hour operation, but strong enough to get through to the nearest space station in bursts. Very good. You're not a bad engineer, Bulkley. A little untrustworthy, with homicidal tendencies, but highly skilled."

The man said nothing. But he thought, and the nature of his thoughts was obvious.

Newell hesitated. It seemed foolish to go ahead with keeping a promise to a man who had tried to kill him, but Newell had always kept his word before, and he did not intend to break it now. "All right, Bulkley," he said at last. "Now I'm going to keep my part of the bargain. Come with me."

Newell led the way to the prairie-like field where he had been working. From the corner of his eye he kept a watch on the other man, as if he didn't quite count on the deadly plants to keep Bulkley up to the proper behavior. He knew, as he didn't want Bulkley to know, that the plants had only a short life, and that in the normal course of events it would be only a day or two more before the man was free of them.

The field was bare and looked recently plowed. The normal plant life had been killed off, and the half-acre of brownish-black soil had a stark and naked appearance.

Newell stretched out a hand filled with curious objects. "Take a look at these. What do you think they are?"

Bulkley caught his breath in surprise. "Teeth! Big, pointed brown and

white teeth! There are animals on this planet after all!"

He stared around him in an obvious access of terror. The planet had been bad enough before, with its great falls of trees and its earthquakes. Now it seemed to be acquiring new and equally horrible dangers.

But Newell said reassuringly, "There are no animals. Now, get back and watch."

Newell had a plastic bag full of the brown tooth-like objects, and he slung the bag over his shoulder before he walked through the plowed area. As he strode between the furrows, scattering the seed sparsely to right and left, and reaching into the plastic bag from time to time for another handful, he looked like one of the ancient prehistoric farmers back on the mother planet.

FEAR GAVE way to confusion in Bulkley's baffled face. "What do you expect to grow?"

Newell didn't answer. He glanced once at the rapidly rising sun, pink and hot, and then moved on rapidly. He was completing the sowing of the last furrow before he turned to look back.

On the other side of the field, tiny shoots of purple and green were already showing. They pushed up slowly, imperceptibly at times, and then again in sudden spurts, like the minute hands of an ancient timepiece whose mechanism worked jerkily. When the first shoots had reached a height of six inches, the last shoots on the other side of the field were just beginning to break through.

"They're growing fast," said Bulkley, his personal woes momentarily forgotten at the amazing sight.

Newell had rejoined him. "I've learned how to accelerate growth."

"Where'd you get the chemicals you needed?"

"From the other plants. I made extracts. A chemist would have a field day with the variety of different compounds these plants contain. Alkaloids of entirely new types, indole-aliphatic acids, everything. I've been able to extract fairly pure mixtures that will stimulate the kind of growth I want, help twist the plant in the direction I want it to take."

"Then those brown and white things were not teeth, but seeds."

"Yes. Their natural color is white. The treatment I gave them turned them partly brown. But watch."

Some of the plants were almost two feet in height. So far they had grown straight up, apparently without putting forth shoots or branches of any kind. Now there began to grow what seemed like the beginnings of branches. On the top, a small brown swelling began to form.

Slowly the branches developed, one on each side, slowly the brown swellings grew. As the men watched, the shoots divided at the bottom. The growing plants began to look like caricatures of human beings, fantastic scarecrows that arose from the incredibly nourishing soil.

When they had reached four feet in height, the plants were more human than ever, uncannily so. The purple had disappeared, and now they looked like brown men, their faces and bodies streaked with white. Bulkley was silent, his eyes filled with wonder and a new fear. There was something else, too. Newell thought he could detect the beginnings of crafty calculations.

Still the plants continued to grow, both in height and in width. And as they grew, they became more human.

Newell gazed with awe at the thing that he himself had wrought. Science

it was, the mere application of simple and easily understood principles—the use of plant hormones, light, heat, and other simple agents which he had not troubled to explain to Bulkley—and yet the results struck him as a miracle.

The crop he had sown filled the expanse of field before him. Brown and white manlike things writhed and grimaced as the stimulating rays of the hot sun reached them. Rows and rows of them, at least two thousand in number, an aura of power, of energy barely held in leash, surrounded them. They began to twist from side to side, as if in anger at the roots that still held them to the ground, as if trying to escape and wreak vengeance on some enemy yet unknown.

Newell was reminded of the ancient legend of Cadmus, who had planted dragon's teeth and seen the teeth grow into an army of soldiers, whom a trivial incident had provoked into deadly combat. But nothing would set these soldiers off, he thought. His control of them was too good.

The pencil of Newell's flash beam widened into a conical ray, swept over the field. Where it struck, one brown manlike thing after another froze into a posture of tortured strength, of motion held temporarily in check by a force that could not last. The field seemed to overflow with a great uneasy quiet.

And then the quiet was shattered, the sun in the sky blazed like a nova and blotted out the strange sight. Newell dropped to the ground, while behind him there came from Bulkley a harsh laugh of triumph.

WHEN HE awoke, it was dark. He was lying on his own bed, unbound. He had no idea of how much time had passed, of how long he had lain unconscious. But his head

throbbed painfully, and through it there passed a series of harsh noises, of shrieks and cries that grated on his nerves. As he lifted himself to a sitting position, the noises began to make sense. He realized that they were the sounds from a television program to which Bulkley was listening.

They were weird, shrill, piercing. Exotic music, he told himself. Music to accompany a dance such as that he had turned off—how long before? The program was repeated every two days. That meant that he had lain unconscious for at least a day and a half.

He wondered what Bulkley had learned in that time. More, he knew, than was safe. Enough, he feared, to do tremendous harm.

Newell forced himself to his feet and staggered to the door. As he pulled it open, a pair of brown and white hands gripped him, one from each side. Bulkley, at the television set, grunted, "Time you woke up."

Through still dazed eyes, Newell stared at the creatures holding him, the creatures which he himself had changed from plants into the semblances of men.

Bulkley said quietly, "You made a bad mistake, Newell. Those ropes you had on me were slackening just enough to let me get at them. First I slashed the ones around my neck with a knife, and then I was able to get at the others—and at you."

"And now you control these creatures." It was not a question, but a flat statement of fact—of sickening fact.

"Thanks to a couple of notebooks of yours. You gave me credit before for being a good engineer, Newell. I give you credit now for being a good biologist. You worked out the details so well that it was a cinch to follow them. And when I found your note-

books in your room, I knew that I'd be able to do with these creatures as I pleased."

As he talked, his eyes remained fastened to the screen. The same dancer whom Newell had turned off on the previous occasion was now performing again, this time almost fully clothed. Now he could catch quick glimpses of her face as she whirled rapidly around, see what genuine charm she possessed. Now he could wonder if Bulkley was quite so irrational in wanting her, in dreaming about her.

Bulkley said, "These things were easy to condition. At first I used lights of different wave-lengths, then spoken commands along with the lights. I just followed your notes all along. The things learned faster than dogs or monkeys. It was no trouble at all to get them to respond to spoken commands alone. All I had to do was talk loud, so that they would be sure to catch the sound in their vibration-detecting organs. It's almost as if they had brains."

Newell said dully, "They have, in a way. They have central motor control in the upper part of the chest—or in what would be the upper part of the chest in a man."

"That explains it. But certain kinds of things they don't learn. I've tried them with heat rays, mechanical shock, chemical poisoning. They react, but they don't learn fear. That means they don't feel. And that's perfect for the things I intend to do with them."

THE CREATURES beside Newell made no sound. They were as motionless as the species of plants from which they had descended. But they gave an impression of alertness, of waiting, that was more human than plantlike.

"Let me show you some of the

things I can get them to do," said Bulkley. He put his fingers to his mouth and whistled shrilly.

Two more of the creatures came through the door of the hut. "Take fire," said Bulkley.

One of them picked up a fuel lighter with one stubby hand and set the flame to the end of his other arm. The material charred, flickered, and then caught fire. The expression on what passed for a face did not change.

"Put out," ordered Bulkley.

The flaming arm thrust against the side of the hut and put out the fire. Again the expression on what so horribly resembled a human face remained unaltered.

"That'll give you an idea. They'll do anything they're conditioned to do—and I know how to condition them. I haven't given them very complicated commands as yet, but they're learning fast. And there are two thousand of them."

"They're dangerous, Bulkley." Newell's head was clearing, and he was beginning to realize what the other man intended. "They may burn their arms as ordered, but you're really the one who's playing with fire."

"I'll take my chances of their turning on me. I've got them under control. And I've got you there too."

The dance came to an end, and he switched off the set. "I've got a little business to attend to, Newell. A million or so miles off this planet." He noticed Newell's surprise, and grinned evilly. "I can't get as far, yet, as the next planet. But that wrecked ship had better parts than I let you know. It even had several lifeboats, almost intact. I've taken parts of those boats and built myself a low-powered one-man jet job that'll help me get more supplies. In a few hours from now you ~~shift~~ that screen from the entertainment channels to some of the auto-

matic space scanners, you'll be able to see what I do. I think that what happens will keep you entertained. But don't try to get away."

The door closed behind Bulkley and two of the creatures. The other two, their handlike appendages on Newell's own arms, relaxed their grip, but remained at his side.

Newell took a deep breath, and tried to think. He knew better than to believe he was free. A dog could be trained in a few weeks, *was* trained in the old days, to be an effective canine soldier, to watch with a fierce vigilance every move you made, to tear you apart if you tried to pull a gun or other object recognizable as a weapon. These plant-creatures learned faster than dogs, were more dangerous. He himself, during his first experiments, had been thrilled to see how rapidly they could be conditioned, with what incredible speed they could go through the motions of learning.

Of their physical strength he had only a rough idea. Flexible plant fibers could be as tough as animal muscles, but that was not where the chief danger lay. What set them apart, what made them horrible beyond the ancient breeds of great cats and feral dogs, and the six-legged harpies of such planets as Venus IV, or any of the other fierce beasts at which primitive humans had once shuddered, was the fact of their insensitivity to feeling. Neither happiness nor pain affected them. They were plant robots who, if once started on their course, let nothing stand in their way. You had to destroy them completely in order to stop them.

No, Bulkley was not being careless as he himself had been. It made Newell sick to recall exactly how careless he had been. He had forgotten that the plants which held the man captive weakened and relaxed their

grip under the direct rays of the sun. In his excitement at seeing the army of growing creatures, he had behaved like a fool.

HHE SWITCHED on the set, the two plant-creatures watching without any motion of their own. The light receptors which were scattered over the entire upper halves of their bodies were so small as to be invisible to the naked eye. But not the slightest move, he knew, would escape them.

A dim picture appeared on the scene, a voice came soothingly from the speaker. "Do you have difficulty falling asleep? Do you suffer unnecessarily from insomnia? Do your troubles keep you awake? Then tune in our special program with Dr. Hypno! Dr. Hypno's soothing personality will put you to sleep without difficulty over millions of miles of space. Dr. Hypno's healing balm for the soul will act as the salve for your wounded psyche.

"Dr. Hypno is brought to you as a good-will service by Psychiatric Associates, Inc., makers of psychic articles of all kinds. In just a moment, Psychiatric Associates, Inc., will bring you the details of a wonderful offer by which you can obtain absolutely free some of the most remarkable inventions—"

He leaned forward to turn the thing off, when suddenly, responding to something in his behavior that must have set off an alarm mechanism, the two creatures seized him and held him firm. He was helpless, unable to move forward or back.

The eyes of Dr. Hypno widened, became enormous, began to glow. A camera trick, he thought dully. But he could not turn his own eyes away. Nor could he close his ears when a soothing voice began, "You are falling

asleep, you are falling—asleep."

He slept.

Strangely enough, he felt refreshed when he awoke. A post-hypnotic suggestion by Dr. Hypno, he thought.

He had his freedom to move once more. Carefully, for fear of alarming the too-alert creatures, he leaned forward and switched off the set.

The space scanners, he knew, were scattered along the main passenger and freighter routes. They were like the ancient buoys on the oceans of water-rich planets, informing sea-faring vessels of their positions. But unlike the buoys these scanners had automatic television cameras attached. In case a vessel met with some disaster and its own sending set were destroyed, some scanner or other was sure to pick up its position and guide a protest ship to the rescue.

On the screen, a tiny silvery figure swam into view. Slowly it grew larger, became a giant shape which blotted out more and more of the background of stars. It was a freighter, speeding in a trajectory which at its closest point would bring the ship to within two million miles of his own planet.

From out of the blackness, a tiny gnat appeared and raced after the freighter. From a gleaming point, the gnat grew, took on definite form. It was a low-powered atomic jet ship, of the most primitive design, resembling the one-man jets of the pre-space-flight era. Speed was high, but the jet was so small that the oxygen store, despite the regenerators, could hardly suffice for more than a few million miles. He could see vaguely the figure of the man inside. That was Bulkley, so intent on pursuit. That was the murderer, going about new murders.

A flash of light appeared at the muzzle of one of the weapons of the jet and, almost simultaneously, the side of the freighter burst open like a

great eggshell. In the heatless vacuum of interstellar space there was no sound. But the great flash of radiation was as terrifying as any roar would have been. The entire screen shone with fierce radiance and then blanked out. The sending scanner had been put out of commission.

HE TURNED off the set altogether, his heart sick, his body tense with excitement. A few hours from now, what remained of the freighter would crash on the surface of the planet. Until then, he had time to think. He had time to find a way out of the horrible mess into which his own blundering had brought him.

He stared once more at the two plant-creatures that were guarding him. Strange, he thought, that they don't look absolutely alike. The arrangement of white streaks on the brown surface is different in each case. They have different individualities. The one on my right looks tough, hard-boiled, but the other one seems to have a kinder expression. They deserve names. Think I'll christen them Tough-Egg and Kind-Mugg.

Then he laughed at himself. I'm trying to read their expressions as if those were human faces, he told himself, I'm ascribing human emotions to them. They're not human, they're plants. They have no feelings, one way or the other.

No feelings at all. They can be used for any purpose Bulkley wants to use them. Committing more murders, for instance.

I'll have to stop him, somehow, figure out a way. They're conditioned to taking orders from him, but I'll have to recondition them. Let me see, now, they're affected primarily by chemical changes, and by light. Sounds as such mean little to them. They get the mechanical vibrations, but condi-

tioning to words comes *after* strong conditioning to different lights. If I had my flashlights—

Trouble is, there aren't any flashlights. There are no sources of adjustable light or heat within the room. Bulkley has been thoughtful enough to remove them. Still, Bulkley can't think of everything. Maybe he made a mistake, as I did. Maybe—ah, the television set.

He moved cautiously, slowly, so that the creatures would not be stimulated by any sudden motion to pounce upon him. He switched on the set again, then turned it around, opened the back, and stared inside. No glowing tubes here. But I can feel a slight warmth when I put my hand close. And those plant-things are thermotropic, they respond to heat radiations.

He turned the set so that the faint heat was directed at Tough-Egg. The plant-creature moved forward hesitated—then moved forward again. Responds to stimulus, thought Newell, but it's a weak stimulus, and a weak response. Can't recondition him—*it*—that way. But it's a start. And maybe Kind-Mugg will respond more strongly.

Kind-Mugg didn't respond at all. Newell muttered to himself in disappointment. Have to try something else, he realized. Have to keep on trying. Maybe, by the time Bulkley gets back, I'll have hit on something good.

The hours passed in almost futile experiments. By the time he heard the rockets of the torn freighter, decelerating what was left of the ship for a landing, he had learned little. But the two creatures left to guard him had become almost like old friends. No doubt about it, they had distinct individualities. No feelings, though. No more feelings than two pieces of furniture.

THE DOOR opened. Bulkley stepped in and grinned at him. "Still here, I see, Newell."

"I saw what you did to that freighter."

"Neat job, wasn't it? I needed supplies I couldn't get off that wrecked ship on this planet. And when I tuned in on shipping news, I heard that this freighter would be coming along with some of the objects I needed."

"You won't get away with it for long, Bulkley. You caught them by surprise because they never expected pirates in this part of space. But the patrol guards have the news by now. They'll be sending a well-armed patrol ship along in a day or so. And you'll be helpless against them."

"Not helpless, Newell. I know exactly how I'm going to handle any patrol ship that shows up. In fact, I'm looking forward to it. The more ships they send, the more supplies I'll have."

The hatred in the man twisted his face into a horrible smile. Newell felt hatred of his own well up inside him at the thought of what the man intended to do.

Bulkley could see how he felt. "Don't like the idea, do you, Newell? Don't like the idea of all those patrol guards being cut down like the worthless space-lice they are? Too bad. Because you're going to help me. That's why I'm letting you stay alive, Newell. You're going to be very useful to me. And you're going to start off by getting me some more of those dragon-tooth seeds."

Newell's teeth clamped together. He shook his head.

Bulkley smiled grimly. "You'll change your mind, Newell. This is too important for me to let you be stubborn about it. Do you realize what I can do with these creatures?"

"I realize. That's why I won't help you."

Bulkley seemed not to have heard him. "The perfect robots," he said, as if to himself. "Trained to do anything I want them to, anything at all. No feelings, no fears. And they're cheaper than any other kind of robot. No expensive machinery to make, no sponge-colloid brain that can go out of order. The kind for which people like me have been looking for a long time."

"They're not only perfect servants, Newell. They're soldiers. What was the old word for them—cannon fodder? That's what they are. They don't know what it is to live, so they don't mind dying. No indoctrination needed, no nonsense about how terrible the enemy is. Just train them to obey, and they kill for you and get themselves killed."

THE MAN had delusions of grandeur, thought Newell. He wasn't crazy—far from it. In some ways he was only too sane. But hatred consumed him, and on this lonely planet his hatred had been too greatly bottled up. Now it had its chance to come out. And when it came, it would bring death and destruction in its wake.

"So you see, my friend, why I wait more of those dragon teeth."

"They're not easy to prepare," said Newell slowly. He was beginning to get the glimmering of an idea that might keep him safe for a while. Bulkley needed him. Why not pretend to go along with what Bulkley wanted, pretend he wouldn't dare disobey—and at the same time put a spoke in the man's plans? "They grow fast once you put them in the ground," he went on, "but before that, they need a good deal of treatment. That takes time."

"Then get started. These two creatures will watch you and serve as your assistants. Maybe, if the process

isn't too complicated, they'll learn how to prepare the seeds themselves. That would be nice, wouldn't it, Newell? The cannon fodder themselves preparing more cannon fodder." He laughed, and suddenly, without warning, changed the subject. "By the way, Newell, we have guests on our beautiful planet. Not the kind of guests I'd have chosen, but they'll do to relieve the loneliness."

The crew, thought Newell. Some of the crew were still alive.

Bulkley flashed a light signal through the window. The door opened, and a man and a woman, guarded by two of the plant-creatures, stumbled over the threshold.

"Mr. Hilton," said Bulkley. The man peered at them from behind thin transparent metal lenses, the high refractive index making his eyes seem enormous. His face was old, lined, worried. He was a hundred and twenty if a day, thought Newell. "And this is Miss Indra Hilton, his daughter."

The girl stared at him fully through her own glasses, the shock of what had happened during the past few hours still visible on her face. An atomic blast that tore out the side of the freighter was not an easy thing to take, thought Newell. Still, those glasses, and those clothes—She'd have been pretty, he told himself, in the right clothes. But perhaps it was just as well, for her sake, that she wasn't pretty. She wore an octagonal hat, as well as octagonal glasses—as weird a combination as a girl could be expected to think up. She looked schoolteacherish in the worst sense of the word. Her clothes were awkward, loose-fitting, the kind some women seemed to choose almost automatically in an effort to conceal any good points they might have. But she wasn't old. No clothes could make so

young a girl seem old. She wasn't past her early twenties.

"This, my honored guests," said Bulkley, "is my very talented colleague, Mr. Newell. Mr. Newell invented those plant creatures who are now guarding you. But he doesn't like what I'm doing with them, so that he is a prisoner just as much as you are."

Newell found his voice. "What happened to the crew?"

"The members of the crew were unfortunately killed in the—the accident, shall we call it?—that incapacitated the freighter. Mr. Hilton brought the ship down to earth with the mechanical landing equipment, setting the controls according to instructions I radioed to him. Mr. Hilton is very good at following instructions."

"I am an educator," said Hilton sonorously. "Yes, Gentlemen, I instruct the young in the best knowledge of the past. It is a noble profession, and it trains the mind in proper habits of thought." His voice didn't sound old. It was strong and resonant, and Newell thought it seemed faintly familiar. He wondered whether at any time in the past the man had taught at a school that he had attended. Greater Procyon IV University, for instance, where he had taken special courses in chemobotany, had thousands of teachers, and most of them he knew only by sight, if at all.

"Miss Hilton also teaches school," said Bulkley. He grinned again. "It seems to me that she could stand learning a few things herself. I'll be glad to teach them to her."

THERE WAS a tense silence in the room. In Newell the feeling of hatred suddenly welled up almost to the point of bursting. He felt a choking sensation in his throat, and in his

muscles an almost intolerable urge to leap forward and smash Bulkley's evilly grinning face. Perhaps, though, that was exactly what the man wanted. Perhaps that was what he counted on, knowing that if any move were made against him, his planet robots would immediately spring to his defense.

Only the old man seemed undisturbed by the threat. He took off his metal lenses and began to polish them. "It is always good to add to one's knowledge," he announced sonorously. The old boy is senile thought Newell. He doesn't understand a thing. But the look of dignity on the old face gave him pause. "Maybe he's just a little slow on the uptake," thought Newell. "Or maybe he's putting on an act."

The old man held up the lenses, stared through them. "Now his face, as well as his voice, seems familiar," thought Newell. "Where in space have I seen him?"

Bulkley waited, as if disappointed that no outburst had occurred. He grunted, "I think that Miss Hilton is disappointed in me. I've really neglected her. Perhaps she doesn't realize the effect that traveling in almost gravity-less space has on a man. It leaves one unable to think for a time of the more pleasant things in life. But you needn't worry about me, Miss Hilton. I'm very glad you're here, even if you don't exactly resemble some of the performers on interspatial television."

Something clicked in Newell's mind. He knew now where he had seen the old man before.

Bulkley said, "I'm going to see what I can do with some of those supplies on the freighter. Meanwhile, Newell, make our guests at home. And don't try to escape, any of you. These plant creatures are too alert. And they can't be bought, bribed, or

won over in any manner whatever."

He went out, leaving them together. Newell said politely, "I've seen you before, Mr. Hilton. On television. You're no school teacher. You're Dr. Hypno."

"Yes, my dear sir, I am Dr. Hypno."

"I had trouble recognizing you. Even now your face doesn't look quite the same—but the special cameras will account for that."

The man nodded. "I am, however, actually an educator, a school teacher, as you so crudely put it. I had dabbled for many years in hypnosis as a cultural activity, and when this firm, Psychiatric Associates, Inc., needed some one of ability, I was recommended to them."

"Can you hypnotize Bulkley?"

"Not, I fear, under present conditions, against his will. Not without special equipment."

"Perhaps that can be obtained." He turned to face the girl. "Any special talents of your own, Miss Hilton, that we could use against Bulkley?"

For some unaccountable reason, the girl flushed. "I am a school teacher too," she said. "My father and I had decided to splurge on a vacation together. Freight rates are lower than regular passenger rates, of course, because freighters lack certain conveniences. That is why we were so unfortunate as to fall into your partner's hands."

"Don't call Bulkley my partner."

The girl's eyebrows went up in a manner that was strangely out of place for a school teacher. "He told us he was."

"He's a liar."

"He said that the two of you were in on a job together before you were caught."

NEWELL said grimly, "Bulkley is developing a sense of humor.

What actually happened is that he framed me in order to shift the blame from himself. His plan worked only partially, and we were both convicted."

"Then this planet is a penal colony?"

"A substitute for one. In the old days, when crime was supposed to be common, I understand that the government maintained numerous penal colonies for convicted criminals, with psychiatrists to recondition the more promising colonies. But the last regular colony had been abandoned fifty years ago, and they didn't know what to do with us until some one hit on the idea of exiling us here. We were given all the supplies we could need, except those that would help us escape from the planet. And we began to have hope even of that when we discovered a space ship that had been wrecked a long time before, and still had useful equipment."

The old man was staring around the plastex room. "Primitive, but apparently comfortable," he commented. His eyes fell on the brown and white creatures who were guarding them. "Those, sir, I take it, are to be our permanent custodians. They appear to have distinct personalities."

"They look different," agreed Newell. "I'm hoping that I'll be able to work on them." His eyes came back to the girl. There was something about her that baffled him. Why had she turned red when he asked her whether she had special talents? And why was he so irritated by those unbecoming octagonal glasses, that silly hat, those stupidly ugly clothes?

He reached over, and with an abrupt motion lifted the glasses from her face. The transformation was striking. In the fraction of a second, she had become beautiful.

With no lenses to distort or conceal their expression, her eyes blazed.

She sprang at him, and her hand stung his face. The two plant-guards, their light receptors responding to the sudden motion, wavered between him and the girl, their bodies quivering like trees in a storm of emotion. They had been conditioned to react to certain kinds of danger. But in a situation of this sort they did not know what to do.

NEWELL'S hand went to his face. "You have a powerful swing," he said ruefully. "Isn't that unusual in a dancer?"

"So you know who I am!"

"Yes. Those glasses and those clothes were an effective disguise, but after a time your face did begin to seem annoyingly familiar. You did those exotic dances of Earth. Perhaps I'd have realized sooner if I had stopped to think that they were on film, just as your father's hypnotic tricks were. Somehow, however, I took it for granted that you were dancing in the studio."

"No, those dances were all recorded. I did them when I was working for my degree in Galactic Anthropology."

"What in space ever gave you the idea of wearing such clothes?"

"It was annoying to have people recognize me and turn to stare at me everywhere I went. It interfered with my getting new material."

"Maybe you don't know it, but Bulkley is a special fan of yours. He's been wanting to meet you for a long time."

"When I meet people like Bulkley, I always wear my glasses." She took them out of his hands and returned them to her face. He was amazed to see how completely they transformed her features back again. Now she was once more the dowdy woman of a few moments ago.

"At any rate," he said, "now I

know what those special talents of yours are."

This time her expression was smooth, inscrutable. "You don't know the half of it," she said softly. "I have a surprise in store for your friend Bulkley."

Footsteps sounded outside. The door swung open, and Bulkley grinned at them. "Talking about me, I imagine," he growled.

"Nothing good, of course," said Newell.

"I'll take care of you later, Newell. Meanwhile, we'd better get to work. I expect a visit from a patrol ship, and I want to be ready for it. You'll start at once to prepare those dragon-tooth seeds. I want them in a hurry. As for our guests, they'd better start building themselves a plastex hut. Unless, that is, Miss Hilton wants to move in with me."

"No, thank you," she said contemptuously.

"You don't realize how you're being honored. But if you won't accept, you don't have to—now."

The old man was staring at him. Bulkley turned to him in some annoyance. "What in the galaxy are you looking at?"

"You, sir. I am attempting to estimate your intellectual and emotional strength."

He was trying to decide, realized Newell, whether Bulkley would be easy or difficult to hypnotize. It was a crucial question. For a time there was silence, as if all knew that they were weighing their future in the balance.

BULKLEY uttered an uneasy laugh. "You'll find that my strength is enough to keep you here. Just don't try any funny business."

"Of course not. As prisoner to captor, may I offer a suggestion, sir?"

"I don't want you to offer anything."

The old man nodded, as if pleased at the answer. "As I expected."

"What are you so happy about?"

"To find you so suggestible. If you will forgive an old pedagogue the weakness of indulging in his favorite vice of lecturing, I must impart this fact to you. There are two sorts of men who are extremely open to suggestion. The first kind adopts everything that is proposed to him."

"You'll find out that I'm not like that," said Bulkley.

"I have already done so, sir. You go to the opposite extreme. You *reject* everything—because you realize your own weakness. You put up artificial barriers to keep from doing as other people propose. You don't trust your own power of judgment to decide on what is good or bad. That means that once the barrier is crossed or broken, you will be at the mercy of the person who has broken it."

Newell found himself wondering. The old man was pompous in manner, vain of his ability, but he had the shrewdness of the centenarian. And now, he might be right about Bulkley. Beneath the man's harsh brutality there might be a great lack of self-confidence. On the other hand, the whole thing might be simply a lot of psychological double-talk, intended to break down Bulkley's powers of resistance.

Whatever it was, Bulkley didn't like it. He snarled, "I don't know what you're talking about. But I do know that you're of no use around here, and it wouldn't take me much to get rid of you altogether. Now get out, and start working on a plastex hut for yourself." He gestured to the side. "You'll find a foam gun in that closet."

Newell left the room, the two walk-

ing plants keeping close beside him. There were possibilities, he thought, in the old man. He was testing Bulkley, probing for weak spots in the man's psychological make-up, without Bulkley's being aware of it. Unaided, he might not be able to hypnotize the murderer against his will, but with the proper apparatus, there were distinct possibilities of success. And now that Bulkley had to rely on them to prepare for the visit of the patrol ship, they might be able to make something that would be effective.

But Bulkley, they soon found, was not so stupid as to let any of his three captives lay hands on dangerous equipment. Newell tried to stall in various ways—he found a sudden need for chemicals or ultra flashlights at moments when Bulkley was busy with his own preparations. At such times, despite his desire for speed in the work, Bulkley made him wait. The proper chemicals or lights were used, and then removed to a spot where neither Newell nor his fellow captives could lay hands on them.

BY THE END of the third day, after he had killed as much time as he dared, Newell had three thousand of the dragon-tooth seeds ready. That same night, the trouble that had been brewing finally erupted.

The pink sun was setting behind the trees, and the sky was quickly turning dark as Newell returned to the hut that he and Bulkley still shared, his guards dogging his footsteps as usual. Bulkley himself was not in sight. On the other side of the clearing stood the plastex hut, somewhat clumsily put together, that the old man had built for himself and his daughter.

Newell had seen little of the girl these past three days, although he had thought of her a great deal. There

was irony in the thought that of all the women in the entire planetary system, she was the one that Bulkley had been the most eager to meet, although now that he had her practically in his grasp, he failed to recognize her.

Now, as Newell watched, the girl slipped out of her own hut and came toward him. Despite her deliberately unattractive clothes, she moved with the lithe grace of the trained dancer. If Bulkley had happened to see her at that moment, her walk alone might have given her away.

But apparently he was nowhere near, and she was able to gain the hut without interference. She came in, her plant-guards following her as they followed all of Bulkley's captives.

She began abruptly, "I wanted to talk to you. Alone."

He nodded. "Here's your chance."

"I don't know whether or not you were telling the truth about being framed. For all the evidence I have, you're as much a criminal as Bulkley."

"What do I have to do to convince you that I'm not?"

"Nothing. You can't convince me. But it won't matter—at least, for a time. The main thing is that we've got to work together against him."

"Of course. Do you have a plan?"

"Father has. He says that Bulkley's so suggestible that if he had even the crudest hypnotic equipment, he'd be able to control the man."

"I've looked for equipment we could use. I've found nothing."

"Father suggested this television set. He might be able to use some of the transistors. Two would be enough."

"That's an idea. But suppose Bulkley comes in and decides to turn on the set?"

"That's a risk we'll have to take."

Let's hope that we can hypnotize him before he discovers that something's wrong."

Newell walked over to the set, and opened it up. Quickly removing two of the tiny tubes, he put them in her hands. "Here they are. Tell your father to make use of them as soon as he can."

"Thank you."

"Tell him not to go to the trouble of hypnotizing me, though. Tell him that his daughter's eyes have already had that effect."

"You're rather suggestible yourself. How long is it since you've seen a woman on this plant?"

"A little over six months. But I haven't seen one like you in a lifetime."

"It's my clothes that attract you to me," she said sardonically.

HHE DIDN'T answer in words. He saw a smile playing on her lips, and suddenly, moved by impulse, he pulled her to him, as if anxious to obliterate it with his own lips.

For a second or two she let him kiss her, then pushed him away. "Your friend is coming," she said simply.

Bulkley's footsteps were audible outside. He came in, saw them, and frowned. "When the cat's away, the mice will play," he said.

"I suppose so," she admitted coolly. "The old proverb seems fitting, although I've never seen a cat, and haven't the slightest idea what a mice is."

"*Mice* is plural. Singular *mouse*," explained Newell. "Once infested Earth, but could never adapt to other planets, and were eventually exterminated."

"Good idea, extermination," said Bulkley heavily. "I'd keep you, of

course, sweetheart," he told her. "But I'm beginning to think I won't need Newell or your father any more."

"You have a tendency to turn to murder to solve your problems, Bulkley," said Newell. "But this time I'm afraid you'd only complicate them. If you want more of those dragon's-teeth seeds, you'll have to keep me around."

"I wonder. You talk a little too much about murder, Newell. Almost as if you wanted to dare me. And our little school teacher friend here seems to be daring me in another way. I'd hate to disappoint her."

He put a rough hand on the girl's arm. Newell started toward him, only to find himself seized in the firm grip of two plant-creatures.

Bulkley said, "Take it easy, Newell. There's nothing you can do."

The girl said sharply, "Take your filthy paw off me."

That was the only encouragement a man like Bulkley needed. He laughed, and pulled her toward him.

What happened then amazed and startled Newell almost as much as it did the other man, although not so painfully. The great body of the man seemed to leap into the air and fly into the wall. He landed with a thud, and sank to the floor, dazed and half unconscious.

Newell tried to leap forward toward the flashlight that had slipped from Bulkley's belt. But as he did so, the two plant creatures pulled him back. Rough twigs with bark-like surfaces tightened about his arms and held him helpless.

Despite his frustration, he had a feeling of elation, as if he had watched a miracle happen. How in the name of space had the girl done that to Bulkley?

Her expression was unruffled, and her lips were smiling again. "I told

you I had other talents," she said.

"What diabolical trick was that?" asked Newell.

"One of the bits of knowledge I picked up while studying the ancient customs of Earth. It was known in its day as—let me see—jiu jitsu. The principles are simple enough, but the results are startling to a modern race which has long forgotten most of what it knew about physical combat."

Bulkley was picking himself up from the floor. Suddenly, as if he had convinced himself that what had happened to him the first time was only a bad dream, he rushed at her again.

THIS TIME he landed against the furniture and bounced off to the wall so violently that Newell hoped the man's skull was cracked.

"The greater the effort he makes, the harder he lands," explained the girl. "That's one of the beauties of jiu jitsu."

Bulkley's skull was a little too strong for plastex. He picked himself up, hesitated for a moment as if to attack again, and then thought better of it. "Get back to your own hut," he told her hoarsely. "I'll attend to you later."

The girl left, her manner prim and dignified, the manner of a school teacher who has just given an unusually stupid pupil a lesson.

Bulkley glowered after her, and then turned to face Newell. "Wipe that smile off your face," he ordered, in a rage.

"I wasn't smiling at you, my friend. I was just pitying you. You really were a pathetic sight."

"Keep your mouth shut, damn you!" roared the man.

"You'd better be careful from now on, Bulkley. That girl is dangerous. Too bad we don't have an X-ray machine here. You *may* have a serious concussion."

"I'm all right, and mind your own business." He turned to the television set, and Newell realized that he intended to get his favorite program, hoping perhaps that Indra herself would appear. But the set did not light up.

"You probably smashed the insides when you landed against it," said Newell hastily. He stared into the set. "Whew! Everything's in a mess in here."

This time Bulkley cursed bitterly, emitting a long string of oaths that to Newell had novelty and interest, if not charm. Finally he turned away, and sank into his chair.

A little while later he went into his room, and dropped off to sleep.

But Newell stayed up. He thought for a while of the girl, and then of Bulkley, and what he could possibly do to free himself from the man's grip. If only the plant-creatures were less alert! He was glad to see that they hadn't responded to the girl's motions when she had thrown Bulkley head over heels. That was because she had moved suddenly, and her motions had been on a small scale—the shift of weight from one foot to another, the use of one arm for leverage, the other for a gentle push. If he moved like that, perhaps he would be able to put something over on them. He brooded for a long time, trying to find a way.

When finally he too went to sleep, he had made up his mind to wait for the right conditions, and then attempt a sudden dash for safety.

It was the roar of an approaching space ship that awoke them shortly before dawn. Newell and Bulkley rushed out of the hut, to stare up and see the faint white exhaust from the rocket tubes far off near the horizon against the fading blackness of the night.

The patrol ship, of course. The patrol ship that would try to cook Bulk-

ley's goose. He would have to stay for a while.

The ship was coming down at a gentle slope, using the resistance of the atmosphere, as well as its own braking jets, to brake its fall. Its hull gleamed a low red from the heat of friction, then faded into pale gray, the shimmer of heat waves dancing around as it slowed down and made a gradual landing. It settled to the ground in a clearing half a mile from their own plastex hut.

Bulkley's eyes were glistening with anticipation. "That ship's all I need," he gloated. "I capture that and I get off the planet."

"You'll never get away with it," said Newell.

"No? You watch."

And because he had nothing better to do, Newell watched, with a gathering dread whose intensity grew from moment to moment.

DAWN WAS breaking. A door opened in the side of the ship, and in the distance two men got out. The two tiny figures carried a heavy gun of some sort unknown to Newell. This they mounted at the side of the ship, ready for any emergency except that which actually threatened.

Newell opened his mouth to yell a warning, and as he did so, Bulkley signaled an order with his flashlight. A wooden arm closed around Newell's throat and choked off his cry.

More men were getting off the ship. They moved cautiously, in pairs, and without suspicion of the real danger. They knew that two men had been left on the planet, and that one of them had attacked the freighter. But the planet itself was supposed to contain no wild beasts, no plants whose existence meant peril.

They could see about them now as the pink sun continued rising slowly over the horizon. What they saw

seemed harmless—odd perhaps, but not threatening. Brown and white tree stumps stood rooted in the ground near the ship, branches lopped off in a most unusual fashion, so that stump after stump bore a great resemblance to a human scarecrow. They had never seen anything like these stumps before, but this was a new planet to them, and far stranger things were to be seen on other new planets.

With his flashlight, Bulkley shot an ultraviolet signal toward the ship. The captain was expecting no signals, and paid no attention to the response of one of the instruments on his panel. But the brown and white scarecrows sprang into activity.

A pair of them leaped for the nearest gun, tore it from the grip of the startled patrol men who had held it, and turned it on the ship itself. With the sound of firing, a shrill cry of alarm rang out. Terror awoke, and grew at the sudden attack.

The terrain around the ship became a field of battle. Men fell into the clutches of the plant-creatures and did not rise again. Those that survived the first onslaught raced back toward the ship.

Some of the plant-men were hit too. Newell, the grip on his throat loosened now, could see them running around, their arms, legs, bodies in flames, their faces totally oblivious of such feelings and motions as pain and fear. The sight added the final touch of terror to the surprised patrol crew. Those already in the ship yelled to the others to close the door.

But it was already too late. The plant-creatures were inside the ship now, disregarding weapons fired at them point-blank, hunting down the survivors. Though their wooden bodies were torn and shattered, they were still capable of killing.

Bulkley was gloating, his eyes ablaze with the fervor of the despised

man who sees his desperate plans working like a charm. "The ship's mine," he shouted. "Do you realize that, Newell? A complete space ship, all mine. I can pack five hundred of my army into it and take them with me to the nearest planetary outpost; nothing will be able to stand before me."

He was right, thought Newell. The ship was his; the peaceful colonies on unprotected planets lay open to attack. Many a lone-wolf outlaw had dreamed of revenge on society for the wrongs he imagined he had suffered, for the punishments that the innocent had inflicted on him for his crimes. Yes, Bulkley was going to make these outlaw dreams come true.

The field of battle was empty of enemies now—the few human beings still on it were dead. Bulkley took a step forward.

And the planet shook.

THE GROUND rocked and trembled under foot like a vast heap of jelly. They could feel the vibrations from some distant slide of rock strata. In the forest ahead of them, a row of trees suddenly tipped over, as if toppled by a giant hand.

Bulkley fell, his flashlight flying away from him. Newell, dropping to all fours for his own safety, made a lunge for the flashlight, his fingers closing about it. Bulkley did not notice him.

The plant-creatures had reacted in an unexpected way. Their foot-like appendages became rooted in the ground, held them firm. The wind was rising now, and as sudden gusts came blustering down upon them, they bent before it, springing up again when the pressure was released.

It was useless to try to use the lights upon them now. Newell did not know the combinations of wave lengths to which they responded, and

the stimuli from the wind were now so strong as to control their movements. He saw Bulkley rise and turn to him, to shout a few words which the wind carried away, and then take a step toward him.

The ground between the two men opened up. A gulf suddenly yawned between them, a dozen feet wide and a hundred deep. Newell knew from previous experience that the earthquakes were violent, but that the series of shocks was of short duration. In a few moments, Bulkley would recover his wits, and regain control of the plant-creatures. If there was a chance to escape, Newell would have to take it now.

He tried to run, but the wind, now of hurricane force, knocked him down, and he crawled as fast as he could over the heaving ground. He could hear nothing but the howling of the wind, and up above streamers shot out of the sun, while the great disk of the flaming star itself grew dark and gloomy as the vast clouds of dust rose into the air and obscured the light.

He reached the rows of fallen trees, and began to crawl over the tops of them.

Suddenly, as suddenly as it had begun, the earthquake ended. The ground grew firm beneath the fallen trees, the heaving, as of a ship in a violent storm, came to an end. The wind still blew, but not quite with its former force. From second to second he could feel how its strength subsided. Only the clouds of dust still obscured the sun, which he knew from past experience would not regain its brightness for at least a day.

He sank down among the trees. Bulkley would soon be looking for him, desperate because of his need for more dragon-tooth seeds, more soldiers. The seeds which Newell had al-

ready prepared, would not sprout, as Newell well realized, and the other man's rage would be something fearful to behold.

In the distance Newell could see the two plastex huts, their sides cracked and twisted. Well, that damage amounted to little. Plastex powder could be poured into the cracks for repairs, and a twisted hut, although novel in design, was just as good a shelter as one with straight sides.

But the ship—and then he realized why he could see so far ahead of him. The ship had sunk into the ground, which had opened beneath the great hull and then closed again with the power of a gigantic nut cracker. The metal hull was shattered now shattered beyond hope of repair. It was the same thing that had happened to the other space ship long before Newell and Bulkley had arrived on the planet.

He could hear the sound of Bulkley's cursing. The man could not get off the planet now. He would have to wait for another patrol ship to come searching for the first one. His plans would have to be delayed. And for Newell, delay meant hope.

Bulkley would, he knew, send his plant-creatures to search for him from the moment the man recovered from the immediate effects of the disaster. Newell had to get further away. Only distance meant safety.

HE BEGAN to make his way through the trees, when unexpectedly the sound of human speech came to his ears.

He swung around. Indra was helping her father over a fallen tree trunk. They too had escaped. Bulkley was without human companionship now, alone with his army of plant-soldiers. And he was more desperate and more dangerous than ever.

The old man saw him, and a smile broke over the old withered face. Now there was somebody else besides the old gentleman's daughter to talk to. "Ah, my dear sir," began Hilton. "I am pleased to see that you too have escaped. It is an ill wind that blows no good."

"This wind didn't do half the damage the earthquake did."

"And those creatures." The girl shuddered. "The slaughter was sickening. I had to turn my eyes away."

"The slaughter will be repeated with the next patrol ship," said Newell soberly. "Unless we find a way to stop it."

The old pedagogue shrugged. "It was very difficult even under the previous conditions, as you well realize, Mr. Newell, to get at Bulkley. It will be doubly difficult now that we have escaped. He will undoubtedly post guards to watch for us."

"We'll have to think of ways of getting past them. How is that hypnotic device of yours coming along?"

"Ah. I had almost forgotten. Thank you, sir, for reminding me. The fact is, that it is coming along, to use your phrase. Indeed, it is completed. It has not, however, undergone actual test, so I cannot vouch for its effectiveness." From his pocket he pulled out what seemed like a short blunt plastex tube. "Observe."

Newell stared at the end of the tube. He could see it begin to glow dully, turn cherry red, orange, white, and then orange and red again. The next time it raced through the spectral gamut of colors from red to violet, faded out, and seemed to retrace its steps. And all the time its intensity ebbed and flowed, ebbed and flowed, as pulses of energy raced one after the other through the short tube.

He was tired, Newell realized, tired of the horrifying excitement of the

battle. He would like to get away from everything, forget the planet, forget Bulkley, forget the plant-creatures. He would like to rest, to sleep—

His head snapped back, and he was suddenly alert. "Take that thing away!" he shouted.

The old man chuckled with satisfaction. "Indeed, sir, this is more effective than I had thought. The combination of color change and intensity fluctuation makes it difficult for most people to resist. The exact rhythm is, of course, of great importance. It is the result of a great many experiments, a great deal of work and thought for which I, sir, cannot claim a particle of credit. The principle was first discovered by a professor of a distant system—"

"Never mind that, Mr. Hilton. The main thing is that it works."

"Yes, it is, as I say, rather effective, even when used without the adjunct of suggestion. If, in addition, sleep-suggestive words or, on occasion, syllables, are employed, successful hypnosis is almost guaranteed. If you are one of those unfortunate sufferers from insomnia, troubled sleep, inability to relax—"

For the first time that morning Newell found something to laugh at. "You don't have to go into your Dr. Hypno spiel," he said. "I'll take your word for it that it works."

THE OLD man fondled the hypnotic device, like a child with his toy. "I am rather anxious now," he said, "to get a chance to use this on Bulkley."

"Later, Father, later," his daughter told him, and the old man smiled, and seemed to become absent-mindedly lost in his own thoughts, as he wandered away from them into the forest.

Newell turned to the girl, noticing

now that in her haste to escape she hadn't managed to make herself as unattractive as usual. Her clothes fitted the lithe body more snugly and disturbingly. Looking at her now, you could believe that she was the dancer who had appeared on television and aroused the enthusiasm of the inhabitants of an entire planetary system.

But her own mind did not seem to be on her appearance. She was in a serious mood as she said, "We can't stay out here in the woods for long."

"You mean because of your father."

"Yes. He's only a hundred and twenty, but he's not in good health. And if the weather should turn bad—"

"You needn't worry about the weather here. It's mild all year round, and there's little rain. It's the wind that's dangerous. Even when there are no earthquakes, it sometimes rises to hurricane force, and the falling trees would be deadly."

"We'll have to find a cleared space."

"And we'll have to watch out for those plant-creatures. Bulkley may send them out looking for us."

He thought she looked troubled, but he could not read the expression in her eyes behind the lenses. Once more he reached toward her and lifted the octagonal glasses from her face. This time she did not slap him.

"You don't really need those," he said.

"They've just become a habit," she admitted.

"Meant to keep people at a distance. But you don't need them with me. You have your jiu jitsu."

"Yes, I can always fall back on that."

"I suppose I risk being thrown head over heels if I so much as try to kiss you."

"I'm sure that you realize that it's happened to others before you."

"It's a risk that's worth taking."

He was not thrown head over heels. But when he let go of her, his brain was in such a whirl that he felt almost as if he had been.

Bulkley sent his plant-slaves after them that very day, a few hours before the sun was due to set. It was hard at first to see the creatures coming, for their brown and white surfaces blended all too perfectly with the natural browns and whites and greens of their parent forest. But when they moved forward, they became visible. And soon Newell could see them, from twenty-five to fifty of them, scattered in a long thin row and marching straight ahead, slowly, giving a terrifying impression of implacable power.

"What do we do?" whispered the girl. "We can't fight them."

"I know one thing we can do to beat them off. But it'll take time. Meanwhile, we run. They can't move fast enough to catch us."

"But my father is too old!"

"He won't have to race along. We have a head start, and if we keep going steadily, a fast walk will do. The important thing is to keep the distance between us and them, and to add to it."

They turned and began to crash through the forest. The old man grumbled, at first. Running away was beneath his dignity. He would face these creatures and stand on his rights, explain to them that what they were doing was illegal and would be punished.

NEWELL did not wait to hear what else the old man wanted to say. He simply dragged the unwilling pedagogue along and, soon, lack of breath forced his companion to stop talking.

They had been moving for an hour, more at a fast walk than at a run, when a slight wind arose. It was cool and pleasant, and blew in their faces so refreshingly that at first Newell did not think of what it might mean to his plans. When he realized how it could help, he came to a stop.

There were dead and dried trees scattered all through the forest, and inside them he found the tinder he needed. The flashlight he had taken from Bulkley had tiny permanent batteries that were capable of giving a strong spark. It was the work of but a moment to set fire to the tinder, and to nurse the tiny flame until it grew fierce and ravenous.

Using a flaming branch, he spread the fire through the forest. The wind, blowing steadily, spread the blaze into a continuous sheet, and urged it forward. The sound of crackling branches became a steady roar, a roar that rose louder and louder as it seized upon new fuel. The sheet of flame swept on, driven by the wind, and accompanied by the fierce crescendo music that its own fury aroused.

Into the flames walked the plant-creatures. Theirs not to reason why, theirs but to do and die. They died. Newell could see some of them, animate torches stalking through a sea of flame. They moved forward as long as they could, and when the flames had seized them too completely, they toppled over and finished burning on the ground.

There was something to be said after all, he thought, for human beings, with all their fears and imperfections. The very fact that they had reason to live made them worse soldiers under conditions where sacrifices were needed. But sometimes sacrifices were stupid and in vain. Sometimes the best thing a soldier could do for his own cause was to be afraid, and

keep himself alive. And that kind of wisdom the plant-creatures did not have.

Indra looked troubled. "They seem so—so human," she said. "I know they're not, but all the same, I felt as if I were watching human beings walk to their deaths."

He nodded somberly. "I feel the same way. But Bulkley doesn't. To him their lives are meaningless as the lives of so many blades of grass. That's where he has the advantage over us."

"And he has almost two thousand more in reserve?"

"Almost. A few were killed in the attack on the ship, and more have just been burnt, but he still has the greater part of his slave army." Sudden rage seized him at the thought. "The army that I provided for him."

"No use worrying about it now. Father seems tired, and can't run any further. Let's think of shelter for the night."

He shook his head impatiently. "There's something else to do, and I'm the only one who can do it. You find a place for yourself and your father to sleep if you want to. I'm setting to work."

"What do we do for food?"

"I'll show you which plants are edible." He pointed out a small bush. "You can collect these berries. They're tasty and nourishing. If you want to, you can collect a meal for me, after you yourself have eaten. In the meantime, the only thing you can give me is inspiration."

She eluded his arms. "No, I don't want you to forget your work."

He *would* have forgotten it, he told himself. Now that he knew her better, he realized that she could make him forget anything but herself.

He put the thought aside, and began to collect the seeds he needed.

Equipment he could improvise. And most of the necessary chemicals he'd be able to extract from the same kinds of plants he had used before.

SOON HE was so lost in his work that it came as a shock of surprise when she appeared before him with berries to eat. He ate mechanically, hardly aware of the taste of the food.

"What are you doing?" she asked.

"Fighting fire with fire—another kind of fire. Trying to create a slave army of my own."

"How long before they're ready?"

"Two days to prepare the seeds, another day for them to grow, and for the plant creatures to undergo preliminary training."

"Suppose Bulkley finds us before then?"

"Then we're out of luck. The fact is, even if he doesn't find us, I'll have to go looking for danger. I don't have all the chemicals I need. One complex compound is in a vial, in what's left of our plastex hut. I'll have to go back for it."

"That's insane! You'll never be able to get away with it!"

"I'll have to try."

She had turned pale, and Newell thought with surprise, "She's worried about me. Is it because she's counting on me to protect her against Bulkley—or is it something deeper?"

She said, "I'll go with you. Two will stand a better chance than one."

"No. You'd only distract me. I'd be thinking of your safety instead of my own."

"I want to help you. In any way you say. I can help you prepare your chemicals."

He shook his head doubtfully. "That requires careful work."

"I can do careful work. I've done experiments in science. Have you forgotten that I'm a school teacher?"

He looked at her. The effort to escape through the forest from the pursuing plant-creatures had torn her once ill-fitting clothes in many places, and lent them a casual charm they had not originally possessed. There were rips through which he could see her body, and it was not the kind of body he thought of as belonging to a school teacher. Doubtless, he was doing school teachers an injustice.

"Good thing you reminded me," he grunted. And he turned back to his labors.

Thanks to her help, it was evening of the following day, sooner than he had expected, when he retraced his path toward the plastex hut that he had shared for six months with the man who now wanted to kill him.

He had a weapon—the hypnotizer that Indra's father had fashioned. It was much less reliable than a gun, but it was the best he could get, and it would have to do. If he was lucky, he would avoid Bulkley altogether, and not have the chance to use it. But if Bulkley discovered him trying to steal that vial of chemical—

He shrugged. There would be trouble, and all the advantages would be on the other man's side. He must avoid discovery as long as he could.

He made his way cautiously through the forest in the darkness, not daring to use his flashlight. He knew, even before his feet crunched the charred wood, when he had reached the burned-out portion of the forest. The odor of burnt wood was overpowering. And here and there, after more than twenty-five hours, sparks still glowed in the night, like tiny signal fires lighting his way.

After the burnt forest was behind him, he became even more cautious. Bulkley, he knew, now that the man was alone, would be sleeping with the lightness and insecurity of a feral

beast, ready to start up at any noise. The plant-creatures were not very sensitive to slight sounds, not unless they had been conditioned to sound more thoroughly than Newell imagined was possible. But with light-receptors scattered all over their surfaces, they had an extraordinary sensitiveness to light. The merest alteration of dim light to faint shadow, or vice versa, might arouse them.

ONCE A TWIG snapped under his feet, and he came to a halt. But in the army of resting plant-creatures, all was quiet, and after a tense thirty seconds he went on again, more carefully this time, testing the ground with each foot before he let his weight fall upon it. A hundred yards to one side he was aware of a darker shadow, of a great mass that was even blacker than the surrounding black. It was the smashed hull of the space ship, won by ruthless slaughter, and wrecked in a moment of giant and more ruthless playfulness by the planet itself. Now only the top protruded above the level of the surrounding soil.

As he approached the hut, he dropped to the ground and crawled. The less possibility of casting a shadow, he told himself, the better. Walking was more convenient, but also more dangerous. He crawled, slowly and painfully.

He was at the door of the hut. Quiet reigned, a dead absence of sound held sway. No, there *was* a sound—something low and menacing, something—

I'm a damn fool, he thought. It's my own breathing.

He held his breath, and heard through the walls of the hut the faintest of sighs. Now it was Bulkley's breathing he heard, the breathing of a Bulkley who slept untroubled, with no murderous dreams to disturb his

rest, no fear of danger to himself.

There must be plant-creatures on guard, he told himself, some of them must be present in the hut itself. But the hut is dark. Lucky for me that they're not very sensitive to heat radiations as I established with those television set parts. Don't want my body heat to set them off. But they are sensitive to the near-visible infrared, and visible light, and ultraviolet. For plants, they're unusually sensitive. But they need a stimulus in order to respond. No stimulus, no response. If they don't see me, if not so much as a single photon sets off their light-receptors, I'm safe.

Inside the hut now. Stop again, listen again—Bulkley's breathing is louder now, I can hear it almost like an intermittent roar when I hold my own breath, but there's no other change. If only I don't touch a plant-creature in the dark. I know where the chemical I want is, I can feel my way around without switching on a light, as I did for so many months when I lived here. Bulkley may have made changes in the past few days, but he hasn't changed the location of the closet. Ah, here it is. I reach inside. Here are the bottles, large and small. I don't need to read the labels to know what's inside them. Acids, indole derivatives—ah, here's the vial I want. I know its size, its shape. All I need now is a single crystal, but common sense dictates that I take it all. I may need more later, and besides, there's no sense leaving anything for Bulkley to use.

Theft mission accomplished safely—or almost, anyway. Now to get away from here.

Unexpectedly—a noise. A noise not from the hut itself, but from overhead. A faint drone like that of some insect zooming through the air, preparing for a dive at the end of which

it will dip its tiny jaws into human skin for a meal of blood. The drone becomes a roar—the roar of a space ship. Another patrol vessel, of course, here to see what happened to its predecessor. More cautious than the first one, scanning the planet for danger before landing, with no desire to come down in the dark. Very smart, laudably smart. But helpless for all its smartness and all its caution, because its captain and its crew don't realize the real danger, don't realize that death comes from the harmless plants with which the surface of the planet is covered.

STILL, caution keeps the ship safe for the moment. The roar dies away to a faint drone again, to silence again, as the visitors scout the planet.

Hope they don't find us too soon. Hope it for their sake.

Not a sound now. Not even the sound of Bulkley's breathing. And that's odd. Very odd. A man asleep breathes deeply, heavily—

But Bulkley isn't asleep. Bulkley is standing in the doorway of his room, a flashlight in one hand, a weapon in the other. Bulkley is grinning evilly at him, ready to shoot, ready to kill.

Wish to amend previous report. Theft mission *not* accomplished safely.

The man moved forward. "Don't move, Newell," he cautioned. "Not unless you want to die in a hurry."

Newell froze. That damned space ship, he told himself bitterly. Cautious as all space itself. So cautious that it woke him up.

The flashlight went off as the room lights went on. Bulkley said comfortably, "Sit down. Be comfortable. Make yourself at home. Make believe you live here."

Humor from Bulkley, of all people. Or was it just humor? The place *was*

home, the house was still as comfortable as ever, but that wasn't the reason Bulkley wanted him to sit. A sitting man couldn't leap at you with the suddenness that a standing man could. A sitting man was like a sitting duck, easy to keep under the muzzle of your own weapon, and his weapon of surprise taken away from him.

"Thought you'd be back, Newell. Thought you wouldn't want to leave your old pal without saying good-bye. And you're not getting away again. I don't expect another earthquake soon, but if there is one, I'll shoot you dead at the first sign of it."

HELL SHOOT me anyway when he has no more use for me. What do I do now? Those plant-creatures are watching me. Three of them here with us in the room. Strange to think that they were here all the time, like dummies, hearing nothing, seeing nothing, doing nothing. Tough-Egg and Kind-Mugg—I recognize them. Or are these their twins? Could be. The third one looks even more human. A brown scar with white trimmings down a brown and white face. Scar-face. Human and sinister.

Never mind how they look. It's how they act that counts. They act like robots, perfect robots under Bulkley's control. Well, not perfect, perhaps. They have their weaknesses. But none that I can count on. The question is: What do I do now?

Nothing with them directly. Can't think of a thing to do. Bulkley is very likely the real weak link in the chain that's got me trapped. Settle his hash, and the robots are left without orders, they're harmless. Yes, put Bulkley out of commission for a few seconds, and you get a start. And given that start, you can outrun them, especially in the dark.

Let's start off. My hand can slip

casually along the arm of the plastex chair in which I'm sitting. Bulkley notices nothing wrong. Good. The thing now is to talk, talk heatedly passionately—talk in any way that will arouse Bulkley's interest, get him excited, not let him see what that hand is going to do. The hand is going to be quicker than the distracted eye. The hand is going to slip into a pocket and pull out the hypnotizer. The pulsing light will glow and change color, and then Bulkley's eyes will be drawn to it, and then, before he realizes what it is and what it's doing to him..."

"All right, Bulkley, you've got me. What do you want of me?"

"First thing, I want you to help me get that girl back."

"That school teacher? Thought you didn't like her."

"School-teacher in a space-devil's eye. She's that dancer! I had her in my hands and didn't realize it. Just last night I was watching that program—yes, I fixed the television set, my friend, and found that some of the parts were missing. But anyway, I was watching the program, and it struck me that I had seen her face before."

"Quick on the trigger. That's you, Bulkley."

"I'm the one who's in a position to be funny, Newell, not you."

"Sure, sure you're a born humorist."

He's beginning to burn. Fine. He isn't watching my hand at all.

"I'm warning you for the last time, Newell. Don't try to be funny. I want that girl back."

Laugh at him. Laugh when you want to smash his face. "You're crazy, Bulkley. Or is it your turn to try to be funny?"

"I'm not crazy and I'm not funny. I want her back."

"You heard me. The answer is, 'No'."

The man's eyes are glittering. Hope I don't carry this too far. Don't want him to shoot.

His lips seem to be dry. He licks them before speaking. "You're a fool, Newell." Softly, dangerously. "A complete fool. What's the girl to you? You've know her for only a couple of days. She means nothing to you. She can't possibly mean anything. And whether you live or die, sooner or later I'll get her anyway. I'm offering you your life if you help me get her now."

"You're wasting your time." Wrong tactics, here. I should stall, ask him what he wants me to do. But I can't. Not on a subject like this. To hell with even thinking of stalling on a subject like this. "If this is the subject you want to talk about, shoot me and get it over with. I won't discuss it."

THAT'S stopping him. His face is red with anger and frustration. He *may* shoot at that. He says evenly, "Whatever I decide to do to you, Newell, it won't be the way you want it to be. I won't shoot you and just get it over with. That would be pleasant for you. But I don't like to cut my own pleasures short that way. For a time, at least, I'm going to keep you alive."

"You can't keep me alive against my will. Try to torture me, and I'll kill myself. And I'll take you with me."

"You tempt me, Newell." The words are slow, weighed carefully. "I hesitate to tell you how much you tempt me. I've hated your guts ever since I've known you—"

"Ever since you framed me. We always hate those we hurt. Sense of guilt, I suppose."

"You're wrong. I don't feel guilty

about what I've done to you. I'm only sorry it wasn't worse. And I'm going to do all I can to make it worse."

"Aren't you overlooking something, Bulkley? We're not going to be alone on this planet much longer. That was a space ship that awoke you."

"I know that. I heard it."

"Isn't that going to interfere with your plans? Some place out there—" his left arm gestured vaguely toward vaguely toward the window "—that ship will be landing soon. The captain and the crew know that something is wrong with this planet. That's why they came in such a hurry to search for the first ship. They'll be careful, this time. You won't catch them by surprise again."

"You're a fool." Contempt is in his voice. "They can't be careful enough, because they don't realize what they have to be careful about. What ship ever worries about being attacked by trees?"

He's right, he's saying what I myself think. But I can't let him know that I agree with him. "They'll be suspicious of everything."

"No, they won't be suspicious of the one thing they should suspect."

Like you, my friend. You're watching to make sure that I don't try to leap at you from this chair. But you're not suspicious of the vague gesture I make with my left arm. You don't realize that your eyes follow it without your meaning them to, and that while your attention is distracted toward the window, my right hand has slipped into a pocket and drawn out the hypnotizer.

Now to start it going—low power, at first, so that you don't even realize the light's on. Low power, and in the near-visible infrared, so that your eyes begin to be affected without your actually seeing anything. You're sus-

ceptible to suggestion, the old man proved that when he first spoke to you in my presence. Before you know it, your eyes will be glazed, you won't be able to tear them away. You'll do as I tell you, and all your desperate plans will end in failure.

Mustn't look at the light myself, though. I know what it can do. I'll resist it if my eyes do happen to glance at it, but still it's best not to take chances. Fine joke it would be if I were hypnotized myself. Turn the power up a bit, slowly, gradually, so he doesn't even realize the light is visible—

Bulkley is talking abruptly. Words mean little now, but I have to pretend to listen. "However, that space thing isn't the thing I want to talk about. I'll handle it when the time comes. And then there won't be another earthquake to crush it, and I'll have a ship I can use to get off this damned planet."

"So you think."

"That's the way it'll be. But how about you, Newell? Do you want to live or die? Or maybe that isn't the question. Because after I start working on you, I know that you'll want to die, even if I decided to let you live. The real question is whether you'll do it the easy way, or insist on suffering a little first."

"Let's be reasonable, Bulkley." Just a moment of reason, before the thing has him under control. "I don't like to be tortured any more than the next man. But what you're asking—"

"Cut it out, Newell."

THERE'S something unexpected in the man's voice. Something I don't understand and don't like. There's a sneer of brutal triumph, an overwhelming tone of contempt. Have I made a fool of myself?

"What do you mean, cut it out?"

"Stop stalling for time. Because that thing you have in your hand isn't working. And it isn't going to work, no matter how long you keep it going. I'm not susceptible to hypnotizers."

Impossible. He's lying, trying to upset me. The dirty rat is wide open to suggestion. The hypnotizer will work in ninety-nine cases out of a hundred even on the average man, and there's no reason why it shouldn't affect him.

Bulkley's laughing. "There are a few things about me that you didn't know, Newell. I never thought of telling them to you. When I was under investigation, they also figured, as I knew they would, that I'd be susceptible to suggestion, and they tried to hypnotize me. But I was way ahead of them. I pretended to let myself go, but told them nothing, absolutely nothing."

"But how—"

"Because I can't be hypnotized." Triumph in the brutal voice again. "I'm immune to it, at least when tried by any ordinary man or with any ordinary device. You immunize yourself against bacterial infection, viral infection—well, I immunized myself against hypnotism long ago. I went to a specialist who got me under control, and then gave me this post-hypnotic suggestion: *Never let yourself be hypnotized again.* Clever trick for a murderer, isn't it, Newell? And the suggestion's still working."

HIS OUTWITTED me. Let him gloat, he has a right to do it. Crude, murderous, brutal—he's also got a kind of shrewdness I hadn't counted on. He's made a complete fool of me. And the cost—the cost is not only my own life, which doesn't count any more, but Indra's, her father's.

THE SIGHT of his desperate face must have been funny. Bulkley chose that moment to laugh again—and within the fraction of a second, the very strength of desperation had sent Newell leaping out of his chair, his hands reaching straight for the man's throat.

Bulkley's arm went up instinctively in a gesture of self-protection, and a hoarse cry came from his lips. "Help!"

The plant-creatures didn't move. Newell's hands missed the throat, balled into fists, and smashed at the other man's jaw. Bulkley staggered backward, fell. And still his once faithful slaves did not come to his help. Tough-Egg, Kind-Mugg, Scar-Face, all three stood as if paralyzed—no, as if hypnotized. The hypnotizer which had failed on Bulkley had succeeded with them!

Bulkley cursed, and his hand went to the weapon at his side. Newell threw a chair at him. The chair landed, but did not knock the weapon from his hand. Newell raced for the door, and plunged through just as a blast tore a hole through the wall behind him.

He was running in the darkness now, his hypnotizer still glowing. It made him a target for Bulkley, but he had to risk it, now that he knew what it could do to the plant-creatures. He should have suspected what would happen. They reacted in different ways to different light stimuli. When the lights followed one another in rapid succession, as they did in the hypnotizer, they were stimulated to do different, contradictory things. The result was that they did nothing, standing motionless like the plants from which they had descended.

Bulkley was pursuing him in the darkness. A blast came, ripping a hole of flame in the night before the

darkness overwhelmed it again. And then Newell ducked behind a genuine tree, and Bulkley could no longer see the glow of light, could no longer follow. Newell heard his curses die away in the distance.

He paused for a moment to catch his breath before going ahead.

Later, when he told Indra of his narrow escape, he could see how strongly she was affected. Her face paled, her voice shook.

"He'll be murderous now," she shuddered. "He'll come after you, do anything to revenge himself on you."

"He may send the plant-creatures after us. But now we can defend ourselves from them with the hypnotizer, and Bulkley knows that. He'd have to come himself if he really wanted to get us."

"He knows that in the long run we can't escape. Father can't run far. And I wouldn't leave him to Bulkley's mercy."

"But Bulkley doesn't have the time to spare for us. Don't you see, Indra, he has to be ready for that space ship. He doesn't know where it will land, and he can't take chances with it. It may blast a cleared space among the trees and come down among them. And then the sight of his plant-creatures, no matter how much they imitate other trees, will arouse suspicion. Bulkley has to arrange his soldier-slaves beforehand, give them signals as to what to do."

"So you think we're safe for a while?"

"Until the space ship comes down and is attacked."

"But we can't let those crew men be slaughtered the same way the others were. We have to do something!"

"What?"

"Warn them, signal them—"

"Not so long as they're up in the air. We don't have the proper equip-

ment for that. Besides, they'll be suspicious of whoever contacts them. If we did try to signal them too soon, they'd beware of us, not of Bulkley. No, the best thing we can do is plan to reach the ship after it comes down, and spoil Bulkley's surprise."

"You mean to use the hypnotizer?"

"It should be helpful."

"But suppose Bulkley realizes that," she pointed out. "He'll try to recondition his creatures. You say that he himself foresaw that attempts would be made to hypnotize him, and took steps against it. Suppose he finds a way to protect those plant-creatures against hypnosis?"

Newell nodded slowly. "You're right, Indra, there's that danger. I can't laugh it off. I've been underestimating Bulkley all along, but I mustn't underestimate him now. That might be fatal—"

"If we had such a thing as a flame-thrower—"

"We haven't. But talking about flame-throwers reminds me, Indra. As I said before, we have to fight fire with fire. And slaves with slaves. I'm almost ready to do so now."

He pulled from his pocket the vial which he had gone to so much trouble to obtain. "We'll have to go ahead with our experiments, as fast as we can. I'll work through the night to get the dragon-tooth seeds ready for planting."

"How about the field to plant them in?"

"That has to be prepared too. It won't take long to make the proper chemical solutions for that, though. And you can help me."

"Aren't you glad now that I'm a school teacher and have such good ideas?"

HE HELD her in the darkness and laughed. "I didn't fall in love

with you for your ideas."

"You're like any other man. You fall in love for the worst reasons. Because to you I was a pretty face on a television screen!"

"Not only a face."

"Don't make me blush."

"Blush? You're still a school teacher after all! Put on your glasses and get to work!"

The planet had no moon, but during the night the sky cleared, and the starlight poured down upon them, bright, clear, and cool. Newell switched off the flashlight, which he had been using from time to time as he mixed his chemicals, and went ahead with his work in the semi-darkness. Indra worked near him, and the thought of her, so close that he was aware of her every movement, sent a warm thrill through him. No wonder Bulkley envied him, went mad with rage when he thought of Newell's good fortune.

He was within a few minutes of completing his work, when the new day dawned. Indra's father had been sleeping a short distance away, on a heap of leaves which his daughter had carefully collected and made up into a soft bed. Now he arose, somewhat stiffly, and shook both the drowsiness and the leaves from him.

"These are indeed primitively simple surroundings for a man of a hundred and twenty-one," he commented. "And I do not believe that sleeping on the ground is favorable to the condition of my joints. No, indeed, I regard that as a most injudicious proceeding, although, in the circumstances, inevitable. Nevertheless, sir I imagine that the over-all effect is rather invigorating. There is nothing like direct contact with nature to restore the energy of the human psyche."

Newell, too busy with his work to have time for small talk, grunted.

"It is gratifying to know, sir, that you are in agreement with me. It is living in this manner that gives promise for the future of humanity. I sometimes am inclined to believe, Mr. Newell, that our present mode of existence is too complicated, too confusing. It baffles the soul, deprives it of contact with true cosmic greatness. Yes, I fear that we have lost contact with the true Truth, we have been deprived of the simplicity that once was ours. We dwell in great cities, on amazing planets that are parts of great systems. We go, in the happy and carefree days of youth, to great nurseries, and then to great schools, great universities. We enter upon great and difficult duties. It was different, in the old days."

Old men weren't any different, though, thought Newell. Wonder if they could talk quite as well as that. When you listened to that rich resonant voice and didn't pay too much attention to the meaning, you might actually think he was saying something different. So times have changed—imagine thinking that was a great discovery!

But that voice—no wonder the old boy's a good hypnotist. The very way he thinks is calculated to put you to sleep. Fuzzy mind, furry voice—wonder if they had any quite as good as him then, always looking back with regret to *their* old days.

"My father, sir, lived to a hundred and sixty-three, and even then it was only accident that ended his life. I was born when he was one hundred and eleven. I come from a long-lived line, sir, a line that retains its manly powers for many years."

Boasting, huh? Okay, Pop, go ahead.

Indra must have heard him. "Father," she called.

"Yes, dear?"

"I know that Mr. Newell is too po-

lite and too considerate to ask you. but we are doing something in a hurry—"

"An enterprise of great moment, eh, dear?"

"Yes, it's important. It would be very nice if you could help."

"Anything within the limits of my abilities, Indra, dear, anything within the rather wide limits of my abilities. Tell me your difficulties, and I shall do my best to counsel you properly."

"You don't understand, Father. We don't need advice. We'll tell you what to do."

The old throat cleared. "Unfortunately, Indra, as you know, I lack the abounding physical energies that once were mine. Mentally I am as alert as ever, but physically—"

"It won't be difficult, Father."

"One moment. Indra, I must tell Mr. Newell something. Would you believe it, sir, when I was twenty-three, and a student at the Intermediate—no, at the Lesser Galactic Graduate School—Section 4A—or was it 5C?—let me see, now—"

"Here, Father," said Indra coaxingly. "It's really very simple. It's a matter of digging furrows, as we sometimes see in the pictures that have come down to us from primitive times."

"Such menial labor as that, eh, daughter?" But he went over to her, and Indra, to Newell's surprise, soon had him doing useful work.

Newell shook his head to get all those words out of his ears, and then went on with his own work. Unexpected difficulties had cropped up.

The sun was two hours above the horizon when he finally began to plant the dragon-tooth seeds.

IT WENT slower here than when he had first planted them. This was no cleared field where he could stride without watching his footsteps. This

was a partial clearing at best, the path broken by trees, stumps, and bushes of all kinds. But there had been no time to seek for better ground. This would have to do to raise a crop of the dragon-tooth creatures.

The girl and the old man watched in awe as the shoots began to push their way up. Now, as the growing plants became gradually more human in appearance, there was no effect as of an army of men springing into existence. Each plant-creature was surrounded by other plants, so that as the young shoots grew they appeared to be merely coming out of a hiding place which they had assumed long before.

"Remarkable," said the old man. "A most remarkable phenomenon. Still, it is not absolutely unprecedented. I recall the descriptions of some of the plant-beasts of the lesser known stars—"

"Of course, Father." Indra turned to Newell. "How do you handle them now?"

"With lights. It isn't going to be easy. I have my flashlight, and I have the glow of the hypnotizer. I'll have to condition them to signals of different intensity and different rhythms. They exhibit a natural tropism—a tendency to move—toward red light and away from violet. It's doubtless connected with the pinkness of the sun. At any rate, that helps me to control their movements, and at the same time, gives me a chance to combine the light signals with loud vocal commands, condition them to respond to words."

"Doesn't that take a great deal of time?"

"I should be able to get good results in a few hours."

Up above, there was the same roar he had heard the preceding night. The sun glinted on a tiny silvery shape before distance shrank the ship to an

undetectable point.

"That's the space ship that came last night!" she exclaimed.

"They're still cruising around, trying to find Bulkley and me. I hope they don't succeed in spotting the plastex huts too soon."

"But surely, now that they know something has happened to the first ship, they won't be so easy to take by surprise!"

He shook his head. "I'm not counting on them. They know about the earthquakes that occur here, and if they come across the ruins of the first ship, caught in the ground, they may think at first that the ship was the victim of an accident. Bulkley might even take steps to make them think that. He might, for instance, put up a signal of distress."

"Then we don't have too much time!"

"Right. The sooner I can get my soldiers trained, the better off we'll be."

The minutes, as he was painfully aware, were ticking away all too rapidly. Where on the previous occasion the plant-creatures had seemed to grow with miraculous speed, now they hardly appeared to grow at all. What was that old motto again—a watched pot never boils? Motto proverb, whatever it was—and whatever a pot was—it expressed what was happening now. Watched plants never grew.

Somehow, however, they were full size, and then they began to free themselves from the soil. Newell switched on his flashlight, began to coordinate his light signals with spoken commands.

It was amazing to see how quickly they learned to obey—or rather, were conditioned to obey, for of learning in any conscious sense there could be none. Quickly he reached the point where he could march them back and

forth across the field by the spoken word alone.

Up above him, the space ship flashed again. Fortunately, it did not land nearby. Time, he was reminded, was growing short. It was almost with a sense of desperation that he went on with his military drill.

He had taught them to march and maneuver. Now he had to teach them to kill.

IT WAS NOT human beings that would be their enemies, not even Bulkley. Bulkley he would take care of himself. It was the other plant-creatures, their own kind. That's what soldiers are good for, he thought, to kill each other. They mustn't be too ambitious about killing their superiors. In the days when wars were common, there was a saying that generals died in bed.

But General Bulkley wouldn't die peacefully in bed, not if he could help it. For compared with Newell's army, Bulkley's would be at a disadvantage. Bulkley's soldiers had been taught to slaughter human beings, to locate their weak points and attack with a vicious fury that terrified the victims. Put them up against creatures of their own kind, and they'd strike for the heart or throat—and in plants such weak points simply didn't exist. Plants couldn't be terrified, either.

True, there were vital points—but Bulkley wasn't enough of a botanist to know exactly where they were on these creatures. But I do know, Newell said to himself, I'll teach my army. I'll teach them to paralyze the centers of motion in the branches that look and act like arms and legs, to cut off the vital metabolic impulses. When I'm through with them, they'll be perfect killers of their own kind.

They learned rapidly. It was hardly more than an hour after he had begun this phase of their teaching when

Indra suggested, "How will they know which ones to attack? In the actual battle, they might mistake each other for the enemy."

"Good idea. We'll have to give them, if not uniforms, at least distinguishing insignia. They can get green creepers from some of the forest trees, tie them around their arms."

Indra's father was watching the last-minute preparations, the final checkup before Newell set his amazing army into motion. "There is something vastly impressive about a display of military might," he said. "Would that human beings had as much discipline as these thoughtless vegetable creatures! I have often pondered, sir, that the chief weakness of the younger generation lies in its lack of discipline. Young people are unruly, disrespectful of their elders, intolerant of the accumulated wisdom and experience of those who have lived before them. They believe that wisdom begins with them. These plant-soldiers, on the other hand, respect authority and wisdom. They obey, immediately and implicitly."

Newell was not listening. His army was ready, to do or die. He, as the general, was now suffering the uncertainty of all leaders of armed men who have great decisions to make. He would have liked to give them further training, but time was growing short. Already he might have delayed too long.

He flashed the green signal that meant, "Forward, march."

And his army began to march.

It was as if a forest had picked itself up, tree by tree, root and branch, and set itself into motion. A phrase from a play in one of the extinct Earth languages sprang into his mind: "Till Birnam Wood do come to Dunsinane." He remembered that to those old Earthmen the phrase had been a mere bit of trickery, a juggling with

words. Now the words had acquired a literal and terrifying meaning.

The plant-soldiers moved forward slowly and inexorably. How long, Newell asked himself, till they reached the hut, the hut where Bulkley is lying in wait to slaughter the crew of the new ship? An hour and a half at the earliest. If Bulkley suspects anything, if he's been foresighted enough to spy on what I've been doing, he'll try to stop them, burn them as I did his own soldiers. I'll have to watch out for traps, although I may not recognize them until too late, until after they're already sprung. And I'll have to hope that the ship doesn't suddenly decide to land.

ONE, TWO, three, four, *one*, two, three, four. It's a grim burlesque of a human army, four thousand wooden feet marching to a single rhythm. *One*, two three, four, *one*, two, three, four—they keep going remorselessly, tirelessly. No sound of talk to break the rhythm of marching, no irregularities of step to betray the inhuman weakness.

It's hard to breathe. I can feel the breath drying my open mouth, I can sense the rapid beating of my heart. A sudden pain—those are knots tying themselves in my stomach, and writhing in the effort to get untied. Guess this is how it felt to go into battle in the old days, when the human race was still young and foolish. This was what it meant to march, under orders, into the jaws of death.

Bulkley is armed, Bulkley has weapons that can tear apart both human and plant bodies. Me, I have nothing but my own bare hands to fight with. The hypnotizer is useless now. It has no effect beyond a narrow radius, and there's a danger that it would hypnotize my own soldiers instead of Bulkley's. Can't take the

chance of using it, can't risk it.

One, two, three, four, *one*, two, three, four. Human soldiers don't need hypnotizers, the rhythm itself is hypnotic. Getting used to it. I'm breathing more normally now, my stomach hurts less, my heart is beating more regularly. How long have we been marching? A quarter of an hour at most. But now the fear and uncertainty are gone, now I'm ready to face anything. I'm not ready yet to laugh at danger. But it's easier now to pretend that it doesn't exist.

What's that noise in back of me? Two people—funny, I was forgetting about people. All I was thinking of was my nonhuman army. Indra and her father, walking a short distance behind me, the old man giving his comments on the younger generation as usual, the girl white-faced and determined. She sees me turn, she's waving to me.

Maybe I'd better order her back, command her to stay out of danger. She wouldn't obey, though. And besides, perhaps it's better this way. If my army is victorious there'll be no danger. Bulkley doesn't want to shoot her, and my plant-soldiers will protect her from other enemies. That is, they'll protect her if all goes well, if they succeed in doing as I taught them. If they fail, if the battle goes against us, she'll probably die on the field. The thought of it scares me. but it's better, a lot better, than having her fall into Bulkley's hands.

One, two, three, four, *one*, two, three, four. Another quarter of an hour gone, a third the distance covered. No sign of the ship. Time is still in my favor.

One, two, three, four, *one*, two, three—something's happened to the rhythm. A brown and white object is rising from the ground and throwing itself at my startled body.

A wooden arm clutching for my throat, the feel of bark bruising my skin. Smart guy, Bulkley. Hit at the general, leave his army leaderless. Kill the general—

Both hands on the wooden arm, try to wrench it away. My strength against the strength of an unfeeling plant-creature's, my muscles of flesh and blood straining for a moment raining—no, that's perspiration that's starting up on my forehead. This is something to sweat about.

Deadlock. Neither of us can move. Both straining, motionless—

Deadlock broken. My own soldiers have remembered their lessons, are applying the training I gave them. They're rallying to my support. The wooden arms of the enemy fall limply away from him, the brown and white form is collapsing. Good soldiers.

SLIGHT disorganization, though. Quick light signals to bring my men to a halt. Signal to reform ranks quickly, to march on again.

So Bulkley has scouts out to watch for me. I haven't given him too much credit. Bulkley is no fool. But the question still remains: has he taught his own soldiers a defense against the attack of their own kind?

Up above, there's something doing. A silvery light, flashing once more. And this time it isn't going away. The great shape is cruising back and forth, slowly, as if on guard. And as it cruises it grows larger.

Have to tell Indra. "The ship's coming in for a landing! We'll be too late after all!"

"Not unless they lose all their sense of caution. They're not being reckless. Even after they land, they may not leave the ship until after they've done as much investigation as pos-

sible by instrument. If we could only get our own soldiers to move faster—"

"I don't see how, unless—wait a minute, I've got an idea. If I intensify the stimulus, I may get a stronger response. I'll turn the green signal on as strong as possible, and keep it on."

Sweep the green light across the field, back and forth, back and forth. No response. That's what it seems like at first, anyway. But after a time—yes, the army is gradually picking up speed. The rhythm is quickening, quickening. Now it's one-and-two-and-three-and-four, now they're moving ahead at almost twice their former speed.

But the ship's coming lower and lower. In another ten minutes it will land.

The old man's protesting. I can hear him back there, he's complaining because the quickened pace of the advance is leaving him behind. Another twisted figure is springing at me, but this time I'm not taken by surprise. This time I react quickly, I dodge the dangerous wooden arms and leave it to my soldiers to dispose of the intruder. Whatever else happens, I mustn't delay the main body of troops.

The ship is easing down close to the ground. Some one aboard it must have seen the other patrol ship, some one must be curious to know what's happened, for the place of landing is little more than a hundred yards away from the previous wreck.

Ten minutes now, ten desperate minutes. Let them stay inside for those ten minutes, and they'll be safe. If only I can warn them in some way—

Have to run ahead, thread my way through my own soldiers. The rapid pace is telling on me now. Mouth and

throat are both dry, and it's hard to breathe.

But that won't stop me. I'm in front of the men now, as a brave leader should be. A quarter of a mile away I can see an outer door of the space ship tremble. They're going to come out.

"Stay in!" Didn't know I could yell that loud. "Don't come out! Danger!"

HAD THEY heard him? Had they picked up his warning on one of their instruments? Or had they been too careless to listen.

The door stayed shut.

Two figures sprang at him. He tried to twist aside, but other figures cut off his path, and still others blocked his retreat. For a moment they surrounded him, grim and impassive as death. Then his own soldiers reached him. The battle was joined.

The field was filled with forms which writhed as if under the blows of a hurricane. What seemed to Newell the most striking feature of the battle was that it was so quiet. Desperate duels were going on in a hundred different places, destruction lay in wait in a hundred different forms—and every one of them silent. These were soldiers that could neither utter shouts to terrify their opponents, nor cry out in pain. At most there was the occasional creak as of branches swaying in the wind, a sharp crack as of a tree trunk splitting in two. The whole scene, so quiet and so terrifying, had the quality of a painted nightmare.

A giant sword stroke seemed to slash through the battlefield, cutting across friend and foe alike. One of Bulkley's creatures had fired a real weapon. In the path of the deadly beam, a series of flames broke out. In a matter of moments, the battle-

field was a blaze of fire.

Palls of smoke drifted over the weird struggling forms, making the nightmare even more horrible. A third of the soldiers originally on the field had already fallen, and it seemed to Newell that, among the slaughtered, most were Bulkley's. The training against human beings that the man had given his creatures had been fatally deficient against other creatures like themselves.

The doors of the ship had not opened. Now, Newell saw the guns swivel around, prepare to go into action. Apparently the patrol ship captain, unable to tell friend from foe, cared little which of the seemingly hostile creatures he slaughtered.

The purple signal of retreat flashed over the battlefield. Newell's soldiers drew back, leaving the open ground to the enemy.

A burst of heavy rays came from the ship, swept the field. Within five seconds, only a few scattered soldiers of Bulkley's army were left standing, and these were burning like torches. The battle was over.

The ship door slid open. Two men with a gun edged out cautiously, their nostrils wrinkling as they caught a whiff of the acrid smoke-filled air. Behind them came two others, similarly armed.

Newell came forward stiffly. He felt exhausted, as if by a day of hard work, although the sun seemed hardly to have moved in the sky. He realized with amazement that the entire slaughter had taken less than half an hour.

"Lift your hands," said one of the men sharply. "And come forward to be searched for weapons."

Newell would have smiled, if his facial muscles had not been so frozen. "I have no weapons. I'm the man who warned you."

"Where's the leader of these creatures?"

"Probably running for his life. He hoped to catch you by surprise, as he caught the other ship."

"What happened to them?"

NEWELL explained, as briefly as he could. Then he was brought into the ship, to explain all over again to the captain.

The latter frowned. "He's probably saved a few slaves."

"And he may be able to create more. The method isn't too difficult. And he may have found another vial of the chemical which I took from him. He's still dangerous."

"He'll have to be caught. You know his habits. And you know this section of the planet. Do you think you can lead us to him?"

"I'll try. We'll have to be wary, though. In forests like these, it's easy to walk into an ambush."

"Yes. It's even possible to be led into one. I wonder, Newell, just how trustworthy you really are."

"Still remembering that I'm supposed to be a criminal, are you? Mr. Hilton and his daughter should be able to testify to my character. They're the ones who were kidnapped from the freighter."

"And they're still alive? Good. Where are they?"

Where were they? They had been close behind him the last time he had looked—but that had been at least a half hour ago, at the beginning of the battle. Newell felt the blood drain out of his face at the thought that they might have fallen into the desperate Bulkley's hands.

"I thought they were near me, Captain. They must have become lost during the battle."

"You don't think they might have been taken prisoner by Bulkley, do

you?" demanded the Captain sharply.

"I'm afraid so, sir."

"That's another reason for finding him in a hurry. Newell, you may have a couple of my men, with a heavy gun. I can't spare any more."

"I won't need any more, sir. I have my own plant-soldiers. They're trained to attack others of their kind, but not human beings. They'll take care of the creatures that Bulkley still has left, and make it possible for us to get at him."

The fatigue of a moment ago was gone. Now fear for Indra and her father seemed to race through his blood, arousing him to new and greater efforts.

Where could Bulkley have taken them? Not across the field, not under the guns of the ship. He must have drawn back from the plastex hut, first stripping it of the things he thought he would need most. Chemicals to create new dragon-tooth seeds, tubes to create light, a generator unit. He would not let go of these if he could help it.

The two men the Captain had assigned to him were waiting. "Stay with me," he ordered. To his plant-soldiers he flashed a light-signal. "Deploy across the field, then advance."

They spread out, moved forward. Smoke drifted across the sky from the still smoldering battlefield, but here, where no fighting had taken place, the ground itself was redolent of leaves and grasses, of small creepers and flowering shrubs.

Now we'll see, thought Newell, which general will die in bed and which with his boots on. This time it's the showdown—either Bulkley or me. But he has a powerful threat in what he can do to Indra and her father.

Everything looks peaceful now, no sign of danger anywhere. Wonder how many slaves Bulkley has left. Less than a score out of the two thousand

he started with, the two thousand I gave him. They won't help him now. And neither will his weapons. I'll tear him apart with my bare hands if I have to.

THE WOODEN army came to a sudden confused halt. Before them stood a man—Hilton himself, holding up his hand in warning. Newell exclaimed, "Mr. Hilton? You're safe! But where's Indra?"

"That, sir, is what I am about to explain to you. Do not advance, Mr. Newell. And tell your men, if I may be permitted to employ the expression to refer to such obviously nonhuman creatures, to remain in position. I am here, sir, under duress. I am, despite what you conceive to be my freedom to speak to you, a captive."

"Then Bulkley's in back of you, holding a gun on you!"

"You surmise the situation correctly, Mr. Newell, and state it concisely. In order to complete the picture, however, I must add that my daughter—" his resonant voice faltered for a moment, then picked up again—"my daughter is also being threatened with death."

"It won't help him. Do you hear that, Bulkley, wherever you are? Your goose is cooked now. Your only chance is to surrender and plead for mercy."

There was a moment's silence. Then the old man said, "He will not answer directly, for fear of revealing his position. He is within earshot, but I myself cannot state precisely where."

"That won't help him either."

"I devoutly hope not, Mr. Newell, but I must none the less repeat the message he gave me. Either you surrender, or my own life and my daughter's will be forfeit. I am not intimidated, sir, although if not for this unfortunate occurrence. I should still have many years of useful existence

before me. I am in my vigorous one hundred and twenties, and my father, as you may not know, lived more than forty years beyond that age, until an unhappy accident—"

Newell lost track of the old man's wandering words. He remembered only that he had to save Indra. Somewhere near them, Bulkley was hiding, the girl probably gagged to keep her from crying out. And she was probably being held by one of Bulkley's few remaining slaves, so that she couldn't run away. But where was the group concealed?

He caught the thread of the old man's words. "And those, sir, are his terms."

"Say that again!"

"I thought I had made the conditions clear. Nevertheless, sir, I shall repeat. Mr. Bulkley asks you to throw down your weapons and come forward unarmed—after giving orders to your men to retreat."

"He wants me to put myself in his power, is that it?"

"That is the situation, Mr. Newell. Otherwise he will murder my daughter and me."

Newell shouted, "I have no weapons with me, Bulkley, so I can't throw them down. But that won't stop me from coming at you."

"Wait, Mr. Newell. First you must order your men to retreat."

"I'll signal them, all right."

He put his hand in his pocket and drew out the hypnotizer. The light began to glow, to go through its pulsing sequence of colors.

His own plant-creatures stood as if paralyzed. And Bulkley's? They must see it too. Whichever ones were holding Indra could no longer exert their strength. If she sensed their lack of power, and wrenched herself free—

There was a sudden creaking as of branches swaying from twenty-five

yards ahead of them, an abrupt curse of anger and desperation. A small black object suddenly shot into the air—Bulkley's gun. Newell raced toward the scene of struggle, covering the ground in a dozen strides.

At one side stood Indra, wrenching at the gag on her mouth, her face scratched, her hair dishevelled. Near her was Bulkley, struggling in the grip of a pair of his own creatures. The brown and white caricatures of faces were familiar. In the fraction of a second which it took Newell to grasp the scene, he recognized the features of the pair he had called Tough-Egg and Scar-Face.

ONE LAST choking cry came from Bulkley, and then there was a snap. His head fell forward, his body dropped to the ground.

The creatures which had killed turned to run. Newell flashed a quick signal to his own followers, and seconds later the killers were surrounded and their wooden bodies taken apart.

Indra was in his arms. He held her tight, disregarding the two men the Captain had sent along with him. Finally he turned to them. "Thanks for your offer to be of help, gentlemen. but I have no further need of you."

One of them grinned. "I can see that."

"You can report to the Captain. Both of you."

They started on their way back. Indra shuddered in his arms. "Toward the end Bulkley was out of his mind, completely beyond control. He blamed you for upsetting all his plans. He wanted nothing but to kill you."

"He did his best."

"I tried to think of a way to stop him, but I was helpless. Then, when you started the hypnotizer going, I remembered what you had told me of

its previous effect on these creatures, and was able to wrench myself free. Bulkley tried to turn the gun on me, but he was too close, and I was able to disarm him, using another jiu jitsu method. He rushed me when he realized I was getting away, and then I threw him over my head, and he landed on the creatures nearby. That's what set them off, and made them turn on him."

"All those creatures he taught to kill human beings are dangerous. They'll have to be destroyed."

"Yes, I know. But they seem so human. It will be like murder."

"It won't be. They feel nothing." He went on slowly, "That may change, of course. As they learn more and more, they may develop some kind of genuine consciousness of the world around them. They may develop feelings. And then they'll offer a real problem."

"The ones you trained aren't harmful to us. And they could be useful."

"That's why I first invented them. To be useful. I thought I could show them to the authorities, prove I was capable of doing good work, and win back my rights as a citizen. This planet is dangerous to human beings. But plants can live here, and so could creatures descended from plants. They could build it up, make the planet part of an intergalactic system."

She nodded, "You're right."

"I think that when I explain all that, and the authorities realize what I've done here, and how Bulkley has tried to turn my work to vicious purposes, I'll have no trouble in getting them to reopen the original case, and convince them of my innocence of crime."

"And my father and I can continue with the vacation that Bulkley interrupted."

"Your father is getting too old to

travel. You need another companion. And it won't be a vacation. It'll be more like a honeymoon. In fact, it will be one."

It was at that moment that a sonorous voice came to them. "I have been cogitating, Mr. Newell, and my meditations concern the ethical and sociological aspects of the problems involved in the existence of these plant-creatures. Recalling the many experiences with strange and unexpected forms of life on many galaxies—"

Newell bit back an expression of extreme annoyance. Indra said sweetly "Father!"

"Look at this, Father!"

She held up the hypnotizer that the old man himself had constructed. The light began to glow and pulse.

A glazed look came into the eyes of the man whom millions of listeners and viewers knew as Dr. Hypno. The facial muscles relaxed, the eyes stared blankly.

"He hasn't the slightest idea of what's going on in front of his nose," said Indra demurely.

Which was a good thing, thought Newell, as he stretched out his hungry arms.

THE END

PLANETS IN COLLISION

By OMAR BOOTH

ANYONE WHO has ever observed the Moon through even a field-glass or a modest telescope cannot fail to be impressed, not only by the gigantic craters which dot the Moon's surface, but also by the huge placid-looking seas which are so extensive. In particular "Mare Imbrium", the best known of the seas, resembles what its name implies, a vast oceanic plain undotted by crater holes, except in some limited places.

Dr. Harold Urey, through an elaborate study of the Lunar surface, has theorized that this sea is the result of a meteoric impact, although "planetoidal" would be the better word. He theorizes that a minor planet perhaps a hundred and twenty-five miles in diameter struck the Moon's surface and literally penetrated the still unfused crust. Naturally such a gigantic collision would tear loose huge chunks of matter, sending them radiating outward, tearing huge furrows and valleys in the Lunar surface.

Relatively speaking, since that impact, "Mare Imbrium" has not been much disturbed by subsequent meteoric bombardment, certainly not on a scale comparable with that initial blow. This hammer impact not only penetrated the Lunar crust, but also allowed large amounts of lava-like planetary matter to ooze out of the wound.

In connection with the Lunar surface, it has long been believed that a layer of pumice dust as much as several feet thick covers the Moon. The cause of this whitish

dust was supposed to have been the alternate heating and cooling of the rock by sunlight. Lunar nights and days involve ferocious temperature changes and the hypothesis seems valid, on the face of it.

But recent study with the spectroscope and with radar waves suggests that this theory may be in error. That pumice dust exists actually in a layer a fraction of an inch thick. This is known by the absorption effect it has on both light and radio waves. Evidently the hot-cold erosion of the Lunar surface proceeds at a rate much slower than originally expected.

Another guess about the Moon which is almost certain to be verified when the first Lunar flights become possible is the "fact" that the other side of the Moon, that which is always hidden from us, is exactly the same as the side we see. There are good reasons for believing this, not the least being that, because of the eccentricity of the Lunar path, we see quite a bit more of the Moon than half. All the future explorers will have to do is dignify more craters, seas and mountains with names!

It is impossible at present to detect any atomic radiation from the Moon, but its rugged primitive state suggests that it may be a tremendous storehouse of radioactive minerals, especially since its crust has been penetrated so often and so deeply by such huge missiles. This too will wait on rocketry for verification, but it is more than a guess—it is a reasoned hypothesis. The Moon is more than a barren ball of rock!

ATOM FOG-FILM

Nemesis

• • • *By Tom Carter*

THERE ISN'T much elbow room left in the world today. You can't move around without disturbing somebody else, no matter how careful you are. The world has shrunk and no man is independent of another. "No man is an island...," the poet says, "the bell tolls for thee."

As an extremely practical example of how the twentieth century has tied everything and everybody together, consider the business of the "foggy, foggy film". The science and art of making photographic film is standardized and ordinarily gives no trouble. But in very recent years manufacturers have run into events which were at first almost inexplicable. Batches of film would turn out smeared and fogged by some strange light source—this in spite of the fact that every sanitary precaution was taken. The erratic nature of these faults added to the difficulty of explaining them. Manufacturers all over the world reported illogical failure of film packs. Scientific supply houses noticed that stocked film fogged over for no apparent reason.

But the film manufacturers didn't have far to look for their gremlin. More than most they were conscious of the existence

of the atomic bomb! A hasty check of many fogged films showed that radioactivity was indeed present. And that was the villain!

It seems that the numerous test atomic bombs exploded in recent years throw into the atmosphere vast amounts of radioactive atomic detritus, which spreads rapidly through the air and is carried all over the world by winds and air currents. One of the most basic methods of detecting atomicity is with film, sensitive, delicate stuff which shows the tracks of atomic particles. Debris from the atomic bombs has interfered with film manufacture and caused the producers to re-examine their methods.

Now film factories have to be guarded with Geiger counters and film packs, their air intakes filtered and the whole plant air-conditioned to prevent radioactive matter from entering and contaminating the film vats. Unfortunately the intensity of the interference can't be predicted, because the effects are completely random and erratic without rhyme or reason. A bomb may go off in New Mexico and a few days later the film in Johannesburg, South Africa, may be fogged!—or it may not be. It's a cramped world when you can't evade atomic energy even half that world away!

More **STF** Than You **THINK**

By
SALEM LANE

VOCIFEROUS science-fiction fans clamor for recognition of the genre; everytime they see a fantasy or s-f story in any publication other than an s-f magazine or book they are happy that it is attaining such recognition. Actually, this is a surprisingly limited view, since any examination of modern literature discloses that the theme of fantasy threads through a good portion of it.

Joyce's famous *Ulysses* is in a way a fantasy, since it attempts to penetrate with words the human mind, capturing each stray thought for every moment of the stay. The murky writings of Franz Kafka, too, are pure examples of fantasy. The story *Metamorphosis*, in which a man awakens to find he's become a cockroach, is as fantastic as anything conceivable. No less startling is Kafka's *America*, in which the hero wanders through an America com-

pounded of two parts imagination to one of reality, an America grossly distorted and changed in the most fantastic way.

Go down the list of great modern authors, particularly European ones—Americans seem to have retained a very naturalistic outlook—and you find Gide, Kafka, Proust, Mann—practically all—making intense use of fantasy elements in their stories. Therefore the subject is no novelty and need not cry for recognition.

With the acceptance of Clarke's "Exploration of Space" by a book club, fantasy and science fiction have indeed grown up. When an esoteric, relatively technical book of this sort, concerned with the future problems of space flight, can be acceptable to a very large segment of the reading public, it means that science fiction is due for a surprisingly powerful jolt.

IT HAPPENED TOMORROW

By

E. Leslie Stewart

This pitchman was looking for a sucker but his methods were unique. Would you be a sucker if, in so doing, you became the most important man in this world?

MIRACLES, like women, are completely illogical. This one could have happened almost anywhere. So it picked New York, which needs another miracle like it needs another hole in Broadway. And out of eight million people, or thereabouts, it goes to a guy like Joe....

Joe was short and dumpy. Joe had glasses and a hangover and three dollars and thirty-one cents, cash money, between him and payday. Joe was already late for work, and eight months overdue at his dentist's, and Joe himself often wondered, Who let *me* in?

In short: Joe was human.

Now this sidewalk butcher, this pitchman on 42nd Street, was something else again. He was tall and dark, and handsome as the devil. His suit

was loud, like a circus band, and his voice was twice as brassy.

"Listen, listen, listen here! I make no claims, I make no promises. All I ask is a chance to demonstrate this fabulous fabrication, this provocative prevarication—this one and only Piper's Solution! Just step up closer, but don't crowd or shove... Hey, you!"

Joe paused. "Who, me?"

"All right, you." The pitchman had been looking after a snappy blonde, but he turned his darkling eyes on Joe. "Your undivided attention, please. I shall simply place one drop, two drops, of this magic solvent—watch it carefully, now."

Joe was watching, all right. He was staring at the enormous silver platter which had suddenly appeared in the



"Stop right up, boy! It's good for corns, gotters and earthquakes!"

salesman's hands. Incredibly large, unbelievably tarnished. Sulphur and brimstone couldn't have made it blacker. But the solution did the work.

"There, you see? Surely you can't refute the testimony of your own four eyes?"

"Yeah, but," said Joe uncertainly. "I haven't got any silver, or none like that."

The pitchman gave a last exasperated rub of his cloth, and the pitcher disappeared altogether. "You are too hasty, my friend, you jump at conclusions. You think," he asked with heavy sarcasm, "that my time is any less valuable than yours? That I am a mere pusher of a tawdry tarnish remover?"

"Well," said Joe uneasily.

The pitchman leaned forward on pointed toes, and sized Joe right down to his last thirty-one cents. "You, my friend, are one dull dish. You wear your past like a coat of corrosion. Would you believe it if I told you that this same bottle, this two-ounce vial of Piper's Solution, could brighten your life just as surely as it removed the tarnish from that platter? Bring out your true mettle—like shining silver?"

JOE WAS busy thinking that the solution had removed not only the tarnish but the platter as well; and the salesman had to answer his own bitter question.

"No, you wouldn't believe me. That's the curse of this age, scepticism. You can sell a man razor blades or soap or toilet paper, but just try and sell him anything to brighten his soul!"

He paused to serve a sudden customer, a frowsy character with a moth-eaten soul. He looked like he didn't have a silver dime—let alone a silver platter. Nonetheless he purchased and

then shambled away, as if it were all a habit.

"My friend," continued the salesman, while pocketing the money just as automatically, "I can't hope to convince you without passing a miracle. But I can suggest just one little thing. With Piper's Solution you'll have never a hangover again, as long as you live!"

That, Joe thought, would be miracle enough. But naturally he was suspicious of any hangover cure which doubled in brass as a silver polish.

"Here," said the salesman, reading his thoughts. "Examine the label and sniff the contents! Ask yourself whether you can afford to pass up an opportunity like this, and tell yourself you can't. Only one dollar for two full ounces."

Joe suddenly remembered the extent of his wealth, and tried to hand back the bottle.

"That'll be one dollar, please."

"But I don't—"

"Only one ducat, my friend, and you've bought yourself a bargain."

"But—"

"Pay up, chum," growled a hoarse voice at Joe's elbow. It belonged to the previous, shabby customer—who seemed to be taking an urgent interest in this new transaction. "Pay the Piper, and make it snappy!"

Joe shook his head unhappily. But he seemed to be shaking his head now at a huge gentleman in blue, who favored him in return with a fishy eye.

"Something the matter, Mac?" asked the cop suspiciously.

"No..." said Joe, moving away. Nothing the matter at all, just something missing. Salesman and shill, suitcase and stand—they had all disappeared, like the invisible platter.

But Joe still held the bottle—and speaking of miracles, that was it!

Something for nothing, the dream of Manhattan. In fact Joe figured he was ahead by a buck, and could therefore afford a taxi.

Ten minutes later, and twenty minutes late, Joe arrived at the portals of Dorchman, Gorman, & Splinter. He no longer had his hangover; indeed he no longer had his necktie. En route he had taken a cautious sip of the Piper's Solution, with a result so galvanizing that he had removed his necktie and finished the bottle.

And Joe stepped from the cab a new man, although not realizing himself the extent of the renovation. No longer the sad sack full of nasty old complexes, no longer the shadow of his own shabby past. Because he look only ahead, to the shining future; his memory was as extinct as his hangover.

STILL AND yet, he had not developed his new powers fully. He saw but a little glimpse anon, like one of those movie previews we are bound to call trailers. And he saw himself marching in, storming Mr. Gorman's private fishbowl of frosted glass, and demanding a raise which would not be granted.

The raise was important, if not forthcoming. Something to do with a girl of the future. And she was already there, as he stepped inside, had he only looked a little harder.

Now this was a red-lipped, dark-haired wench with fluid drive and modern conveniences. Her name was Marie, and she also counted chickens. But Joe, long ago, had been discarded as an unlikely egg, and she eyed him now with utter disfavor.

"The Boss wants you should see him, right away."

"Him and me each," answered Joe blithely, without pausing a step, and marched straight into the lion's den.

Mr. Gorman looked up, and his face set like Jello. "Ah... *Mister Driscoll!*"

"I want a raise, Jellyface," said Mister Driscoll. "A hundred a week, beginning tomorrow. Today I go to the races."

Mr. Gorman's jowls had become unset. "You're—you've been drinking!"

"Sure," said Joe. "Silver polish. What about it?"

"You're—you're fired!"

"I knew it before you did, you don't have to yell."

"Get out, get out!" yelled Mr. Gorman.

"Natch," said Joe, and departed forthwith. He wore the pleased smile of one who has just arrived at a foregone conclusion.

"D'ya get fired?" asked Marie, most curiously.

Joe nodded distractedly, while pausing to contemplate some remarkable scenery. There was something he had just remembered—or rather, foreseen. It came to him suddenly, like onion soup. So he leaned over the desk, seized Marie around her pliant waist, and pulled firmly until her lips met his.

"Mmmm," exclaimed Joe, licking the latter. "And that's not all—you just wait and see!" He shook his head wonderingly, grabbed another sample of the bountiful future, and then continued on his happy way.

As for Marie, she shook herself back into her dress and gazed after Joe with indignant respect.

Joe went to the races, just as he said. A frivolous proceeding, you might think, for a jobless fellow such as he. But Joe didn't look at it quite that way, because Joe was walking on air. Even the Long Island Railroad failed to daunt his spirits; he could see himself returning, the richer for the experience.

The actual details, however, were somewhat hazy. By the time he reached Belmont, had paid for a hot dog and general admission, they were somewhat more than hazy. He didn't even have the price of the two-dollar window.

Then Joe realized that the future, as well as the past, could be a first-class pain in the neck. The uncertainty was gone—and also the excitement.

He could see the winners of each race in advance, as clearly as any newsreel. Even the prices on the mutual board, and the bright and shining faces at the pay-off window. The big trouble was: *his* wasn't included.

BY THE time the fourth had run its predestined course, our hero was bored and also desperate. The bugle blew on the velvet track, and the beetles began their prancing parade. Homecoming, Kick Me, Downbeat, and Whirlwind... Joe could see them finishing thus, as sure as Christmas.

He looked no farther, but rather closer, before he finally saw his solution. The horses were nearly at the post when Joe poked his neighbor and held out his watch.

"Mister, you're going to give me two bucks for this."

"Oh, yeah?" sneered the man in accents dubious.

"Yes," said Joe. "It's in the cards, so let's not quibble."

The man looked at Joe, shaking his head. His wife chimed in, from the other side. "You see, Sam? You see what happens, when you bet on the horses?"

"Shadup," said Sam, and reached for the watch.

The minutes ticked by, in minute inspection, but finally Sam took out his wallet. It was the most profitable investment he had made that after-

noon—except for the convincing of his scornful wife.

Joe didn't wait for that happy day. He was already running, with the keystone of his fortune.

The closing bell sounded on his sigh of relief, just as he turned from the window. But not to watch the start, because what was the use? Instead he looked to the tote board, to anticipate the price on his two-dollar winner.

But Homecoming's pace was completely blank! As blank as it was now, or would ever be! And the window was closed, and the horses had started...

Joe watched the finish with heart-sick perplexity. Homecoming romped home, by a couple of lengths. Kick Me second, and Downbeat to show. Sure...but in a few minutes the future was present like a kick in the pants. Homecoming was disqualified, for reasons of etiquette, and loud-speaker and board told Joe what he should have foreseen.

Joe tore up his worthless ticket, and drifted toward the exit gate. His faith was gone, and his brilliant future. Once a schmo, always a schmo, he told himself. Fall in a rose-bed, and I come up smelling like a sewer.

The present was so black, he couldn't see ahead. He couldn't even see the price of his carfare home, in fact, and he paused to contemplate that neat little problem.

The nearest optimist glanced up from his Racing Form and appealed to Joe. "Which do *you* like in the next?"

"Like?" muttered Joe bitterly. "I know—for all the good it does me."

The stranger, who was large and tanned and most opulently arrayed, scowled at Joe suspiciously. "Y'mean it's fixed?"

"Fixed by the finger of fate," said

Joe. "Wishing Star will win, by half a head."

"That dog?" The man snorted and shook his head. "I should live so long."

"Wanna bet?" asked Joe absently, and started to move on. But the persistent fellow had his arm.

"Sure, I wanna bet! Give you ten to one, any amount."

Joe shrugged moodily and retrieved his limb. "A hundred, a thousand... what difference does it make? Wishing Star will win, so you're wasting your money."

"And you just lost yourself a century note!" chortled the other happily. But then he regarded Joe's bargain-basement appearance closely, and snatched his arm again. "Just remember, bud: nobody welches on Big Mike Sloto!"

JOE GULPED, and took a deep breath. Big Mike Sloto was a name both known and feared. He had gotten his start as a gangster.

The horses ran, the people shouted. Joe stood trembling in the sportsman's grasp—until Wishing Star came in, a very surprised winner.

The big man stared at Joe, as he hauled out his bank-roll. "I shoulda known. You even said it was fixed."

Joe shook his head and counted his winnings. "Not fixed like that. I just meant I could see it happen."

"Yeah?"

"Yes," answered Joe earnestly. "Something like television, only a whole lot better." He chuckled happily. "To tell the truth, I didn't even have a quarter."

"Yeah?" repeated Sloto, and reached out again. "So you're so birght, you know what happens next?"

Joe swallowed hard and consulted the future. "Well, we seem to be going somewhere to have a talk. But

I haven't much time—"

"How right you are," growled Big Mike Sloto, "so let's get going!"

FOR A GUY with Time in the palm of his hand, Joe as yet was none too sure of himself. It came as a surprise, sometime hence, to find himself still running on schedule.

Promptly at six-thirty, right on the nose, he dismissed his taxi with an extravagant tip. Then he entered the lucky apartment which housed the person of Miss Marie Odell.

Marie was already groomed to the last breathless inch, and already angry from waiting. But she wasn't waiting for Joe Driscoll, and she made that plain by slamming the door in his face.

"It's no use," said Joe, reopening the door and inserting his foot. "It's the decree of fate, the dictate of destiny. You and me are having dinner together."

"Izat so?" demanded Marie, with hands on hips. "It might interest you, Mister Driscoll, to know my plans are quite otherwise. And I'll thank you to close the door, ere you gently depart."

"Look," said Joe, and closed the door behind him. "You may *think* you have a date with that drip of a Charley..."

"Not that it's none of your business," she said loftily, "but Charles is borrowing his brother's car, and we're dining and dancing at the Sky-line Tavern."

Joe shook his head. "You're going with me, to Sloto's Grotto."

"Sez you!"

"Charley will fail to get his brother's car. He'll wish to settle for a second-run movie."

"Oh," said Marie. "So that's what he thinks! Well, let me tell you—"

The telephone rang, and Joe's grim

was triumphant. "Tell it to Charley, because there he is!"

The conversation was brief, and quite to the point. Marie slammed the phone and inspected Joe as if she were seeking for termites.

"I don't know how you do it, but it's worth finding out. Leave us repair to this Grotto."

The wages of sin are investments. Big Mike Sloto had sinned much, in his boisterous days, and his holdings had multiplied like rabbits. This seafood spa on Fulton Street made a convenient meeting place—as well as a lot of money.

"Now look," said Mike, as he dunked an oyster. "This thing is big, but we gotta consider the angles. Like this babe here." He frowned at Marie, whose angles indeed were worth considering.

"Marie's all right," said Joe. "She won't talk. And how could it be any simpler?"

MIKE LEANED forward, and speared his point with his oyster fork. "Okay. So the races are on ice, as far as we're concerned. But what happens, I dump my dough? The odds go down, and we end up playing for peanuts."

"So we stick to the long-shots, and take it easy."

"Sure," said Mike, with a cynical shrug. "And whereas we do this, the smell is somewhat fishy. So they pass a law and stop us from betting, which is always the way with anything profitable."

"There're lots of tracks and lots of horses," murmured Joe.

"My cousin is a bookie," said Marie conversationally. "I believe he works for you, Mr. Sloto."

"Say!" said Mike. "This doll has got a point. We'll lay off the bets on all the winners!" His face was

aglow at the prospect, but then it darkened quickly. "Naw...it wouldn't look right to the honest citizens. Besides, I'd have to take my bookmakers in on the deal. Also, I like to play the races."

"I don't know what you're worrying about," said Joe complacently. "It's all set up, like the pins in a bowling alley. And our ball's in a grove, and it can't go wrong."

"Maybe," said Mike dubiously. "It is my experience that the best-laid plans of men and mice often go lousy. And what about *this* mouse?" he asked, referring to Marie. "I still wanna know, where does she come in?"

"Include me out," answered Marie haughtily. "I think I shall stick with Dorhman, Gorman, & Splinter, since I like to eat often and regular."

"Eventually, of course," said Joe, "you will marry me."

"I can hardly wait!"

"Oh, it won't be long," Joe reassured her. "Only about three weeks from now."

"Sex," growled Mike, "is worse than alcohol. Let's get back to the horses."

IN THE following three weeks, Joe made two hundred thousand dollars and married Marie. They moved to an estate in the Great Neck region, so that Joe's chauffeur wouldn't have to drive him so far, and there intended to live happily ever after.

But life, alas, is complicated. Joe's partnership with Big Mike Sloto was not only as inevitable as taxes, but also just as annoying.

They had begun by dividing the proceeds half and half, since Mike furnished the capital for Joe's investments. Now Joe could easily finance himself, but the status quo stood static. In fact, the man who chauffeured Joe's Cadillac was a well-known hood.

Because, as Mike explained solicitously, if Joe's secret got out his life wouldn't be worth a nickel.

Even so, Joe had all the dough a man could reasonably ask—but his woman was something different. Marie could spend money faster than horses can run, and she also learned with experience. So Joe was forced to sneak bets on the side, without informing Sloto, and there were rumbles of trouble at Belmont.

It was Marie who brought matters to a final head, just as Joe had anticipated. He went home after a hard afternoon at the track, to find her in tears most copious. It was that horrid Mrs. Fisher, who dwelled nearby. She had inquired after Joe's business connections—and, now the girls were talking.

"I couldn't tell them the truth!" wailed Marie. "I can't tell them you're a—an ordinary racetrack tout!"

Now Joe felt with reason that his touting was something extraordinary. But he could see the future of any domestic debate, so he promised to think it over.

The next afternoon he was still thinking, instead of looking ahead, and the result was sad and unprecedented. He advised Mike to wager on a goat which was late at the gate, and at the finish, even more tardy.

"Joe," said Mike, with pain in his voice, "the best of things must come to an end. It would seem that our friendship has ended."

"That was just a slip of the tongue," said Joe uneasily. "Double your bet on the next event, and I'll have it back in a jiffy."

"Don't tell me," begged Mike. "I don't wanna hear the name of this plug!"

Joe stared at his friend in amazement.

"Never again, because of a conclusion I have just concluded! It's a lot more fun to lose part of the time; it's better to be a sucker!"

Joe didn't argue, because this was his out. He expressed his sorrow, and the two shook hands.

"There's just one more thing," said Mike. "I don't mind the odds when they're on the up and up, so I must convey this warning. Stay away from the racing tracks, and don't go near my bookies!"

"I'll agree to that," said Joe, "with one last request. Please help me to fire my chauffeur!"

BUT MARIE was still unhappy, because that's the way that women are. "It's not a bit better that you're unemployed! And *what* shall we use for money?"

"It's all arranged. It's in the cards, it's on the dice—it's a natural!"

"You promised!" sniffed Marie. "You promised you were through with gambling."

"This is Business," proclaimed Joe. "This is Finance, this is Industry. This is what makes our country tick."

"You mean give-away shows, like Stop the Music?"

"Better than that. It's... Wall Street!"

Marie was impressed, but dubious still. "And what will you use for money? I just spent our last thousand on a new mink scarf—and my diamonds are getting shabby."

"That's the best part of it," answered Joe. "I won't need much dough, because I won't—er, invest. I am going to become an Investment Counselor!"

Marie gazed at Joe and her eyes were rapt. "Just wait until I tell her where *she* can get off!"

"Let's have a drink and go to bed," said Joe happily. "The hell with the

future, at least until tomorrow!"

So Joe pawned one Cadillac and the forty-foot sloop, and set up shop in Wall Street. His office was smart, and his secretary was blonde, and the name on the door was golden.

His first client was a porter with a savings bond, his second was Michael Sloto.

"Boy, oh boy," said Mike, rubbing his hands. "This is big—but we gotta consider the angles. There's the brokers' exchange, and the SEC..."

"Look," said Joe.

"But play it right, and we'll break the House of Morgan! We buy and sell the Chase National Bank! We'll merge Chrysler with Ford, and both with General Motors! We'll take Metropolitan Life for their last two-bits, and we'll tie a can on the AT&T! We'll—"

"We'll do nothing of the sort," interrupted Joe. "I only intend to make an honest living."

"In *this* racket?" Mike was incredulous, and downcast to boot.

"I'll give you advice for my regular fee," said Joe stiffly. "One percent of your capital, plus ten percent of your profits."

"It's a deal, providing I'm your only client."

JOE SHOOK his head. "My services are for all who care to consult." "So?" asked Mike, with lifted brow. "Maybe what *you* need is a chauffeur."

But Joe just smiled, a brave little smile. "Mike, my friend, you're out of your league. The boys on this street play for keeps. Without me, you'll lose your marbles."

"Okay," said Mike, "but it ain't gonna work, for very long."

"Why not? It's all as clear as the Dow-Jones average."

"It's more like the national debt,"

said Mike profoundly. "Everybody gets in on the act—and what d'ya use for suckers? I never knew but one guy made money without extracting it from somebody else—and he's in Leavenworth."

"However, since I'm the first," and Mike shrugged in resignation, "leave us get down to cases. What's the dope on U.S. Steel, and how shall I bet on rubber?"

So Joe gave him the dope—and also a lot of others. His reputation increased as his clientele grew, and his clientele increased as his reputation grew, which made for a cozy circle.

But sad to relate and incredible to tell, Joe had begun to worry about the future. His customers insisted on long-term gains, for reasons of income taxation, and Joe was forced to scan more distant horizons. That was how he discovered the blank, after a certain date. The future ended there, with a bang and a roar—and beyond that was nothing!

Joe finally laid this phenomenon to the atomic bomb, and dismissed it into his memory. There was plenty ahead to worry about, let alone something that might never happen.

His life with Marie had led to drink. There was no such thing as a surprise, pleasant or otherwise. He saw her getting plump, ahead of her time, and her dresses getting tighter. He anticipated her remarks at the breakfast table, and the evenings were just as boring.

Their marriage, in truth, was in a deep rut—and Joe didn't even have the normal consolation of thinking that maybe some day, it was going to be different.

"Joe," Marie would state, like any wife, "this Friday evening we're invited to the Fishers."

And Joe would shake his head.

"You can always get drunk, can't

you, like you always do."

"We're not going," said Joe, with sincere regret. "The Martins will drop in unexpectedly."

"Oh," said Marie, "and *what* shall I tell Mrs. Fisher? Unexpected guests seem an unlikely excuse, especially to say that we expect them."

"Tell her you're going to be sick," said Joe, who was never at a loss for an answer. "You will be, I see, before that evening is over."

And Marie glared her hate, and Joe turned back to his mystery. But even that was as flat as yesterday's beer.

JOE'S BUSINESS life was also limited. His clients prospered, and Joe brought home the bacon in wholesale lots, but then the market began behaving most erratically.

Mike Sloto had been right: a goose must be had for the plucking. Joe's predictions began working against themselves, with a result that was practically zero. Mike suggested a doublecross, in order to make a killing.

But then the Government stepped in and finished the job by freezing prices. Speculation in securities was ordained a penal offence, and Joe himself was investigated by Congress.

All this, of course, Joe had long since foreseen. His clients cleaned up, in the final debauch, and Joe himself was fixed to retire with comfort. He had stopped looking ahead since it was no longer a pleasure; he was quite content to live for the present.

What happened, of course, was something different. Congressional attention made Joe a national hero. And, inevitably, the men who ran the polls consulted him about the forthcoming election.

Joe modestly declined to state, but the Democrats gave forth with a loud

report. Why have a campaign, with all that expense? Just ask Joe, because it's in the bag for us.

Why, countered the Republicans... why hold any election at all? Leave it to Joe; he can write his own ticket. It's *bound* to be Republican.

From such goings-on, it was only natural that the next step should have been suggested by a well known columnist.

"I have it from responsible sources," he wrote for all to see. "Our next president will be the dark horse who has been so much in the lime-light. I have the honor to predict your next president! I give you Joe Driscoll, the man of the future!"

Everybody was happy about this. Marie ordered a gown for the Inaugural Ball, and Mike appointed himself as Joe's campaign manager.

"This is *really* big!" said Mike, rubbing his hands. "We don't even hafta consider the angles! As President, we can make our own."

Joe himself remained glum and silent. He wanted to be President as much as anything; he considered it quite an honor. But.

"What's the matter?" asked Mike finally. "What gives with you, anyhow? You oughta be kicking the gong around."

"I sadly fear," said Joe in a mournful whisper, "that I have lost my gift of prognostication!"

MIKE JUMPED up, like a man with a seizure. He opened doors and closed them again. He pulled down curtains and looked in drawers. He also ripped out the telephone.

"Look!" he said darkly. "This is nothing to give a broad—especially not to your own. What d'ya mean, you can't see ahead?"

"I can't," wailed Joe. "The future's as blank as a solid brick wall... I

don't even know whether it's going to snow on Christmas!"

"The heck with Christmas!" screamed Mike. "All I wanna know—what happens in November?"

But Joe still sadly shook his head, and his voice remained a whisper. "That's just it, Mike—that's where it all ends. *The day before election!*"

Mike leaned forward and grabbed his neck. "Listen, you schlemiel, you forgetful dope! You better get fixed long ere then, or I will fix it for you!"

"There must be a better solution than this," gasped Joe.

"All right," agreed Mike, and relaxed his grip. "Let us begin at the starting. How did you ever get wise in advance, without any brains to begin with?"

So Joe told his tale, his innermost secret. And when he had finished, Big Mike slapped his knee with affectionate glee.

"Look, you jerk, it's all quite simple! The stuff has wore off, like any old drug. All you need is a refill!"

"But there isn't any more...there isn't even a bottle."

"Go get some more," was Mike's command. "Go find this sidewalk shyster!"

"He—uh—well, he sorta disappeared. You might almost say he vanished."

"Don't give me that," said Mike with a frown. You find this guy, and take a swig, or I fear for this country's future."

So Joe went forth and began his search. But meanwhile Mike himself was as busy as kittens, and the days grew steadily shorter. Joe was wine and dined and shunted about: the People's Choice for President!

And Mike was elated, and not dismayed, in spite of the missing potion. "So what difference does it make?

You're going in, without a doubt, and then it'll be tea and cookies. *I'll* tell you how to handle things, including China and Russia."

BUT JOE was too sore to comfort.

He was too far in to retrieve his neck; ahead he could discern no future. He wouldn't, he couldn't, decide his country's fate—when his own was so very uncertain. So desperately he scoured the streets of Manhattan, between his official engagements.

And time grew shorter, and Joe more scared, until the day his search ended. He was stumbling along 42nd Street, when he heard a voice that gave wings to his feet.

"Listen, listen, listen here! I make no claims, I make no promises—"

Joe was already running. It was the same pitchman of old, tall and dark and handsome still. He was across the street, a short distance away.

"—this one and only Piper's Solution! The universal cure, the eternal remedy! The panacea for every trouble known to man! Step up now and end your worries and aches and pains."

Joe stopped suddenly, in the middle of the street. He knew the answer now: he knew what had happened to the future. It was already happening, with a bang and a roar; with also a shrieking of brakes.

The rest of it we can dismiss as a mere bagatelle. Mike Sloto retired to a chicken farm, to live out his days with the pullets. Marie got herself a new husband, whom she met at the inquest which disposed of Joe. A brassy young salesman with points on his toes, and their conduct is quite notorious.

In fact some people say, in a manner of speech, that Marie has gone to the devil.

THE END

CHESS IN ●

● 3 DIMENSIONS

By A. T. KEDZIE ●

AS FAR AS is known, chess is the oldest game on Earth. Its history can be traced with no loss in continuity through century after century, with origins clearly detectable in the civilization that was Asia. The remarkable thing about chess is that it has come down pure and unchanged since almost prehistoric times. Most games, over even shorter periods, are radically changed.

But chess has resisted these changes even though there have been numerous amateur mathematicians and game-lovers who have wanted to introduce other elements than those in the game. It appears that, no matter how far we can project into the foreseeable future, there will be no changes in that ancient and noble game.

Recently, however, a modified chess designed for three dimensions was created and is enjoying considerable success. It is played in a plastic transparent framework with many more pieces and with considerably varied moves and, while externally it might appear quite different from familiar chess, actually its *raison d'être* is much the same. It is simply a complicated three-dimensional form of miniature warfare with pieces and moves.

The interesting thing about chess and all its variants is that it is closely analogous to mathematics, even though you rarely find mathematicians who are skilled chess-players—or vice versa. Nevertheless, *in toto*, the chess board constitutes a rigid, limited mathematical system with postulates, operations and all the basic paraphernalia of the type of thinking we call "mathematics".

For no stronger reason than this, probably, it has been a favorite practice of popularizers of mathematics to insist that their subject is closely akin to a game. Some, like Russell, have insisted that it is actually a game, which by chance or intention happens to have some principles which find application in the real world which surrounds us. This mode of thinking is contagious, because anyone who ever studies a little pure mathematics, with its abundance of symbols, its apparently arbitrary rules, and its lack of association with so-called "numbers", soon realizes that mathematics is truly more "game" than science. Chess, otherwise, appears more science than game!

Gadget-Crazy World

By
L. A. BURT

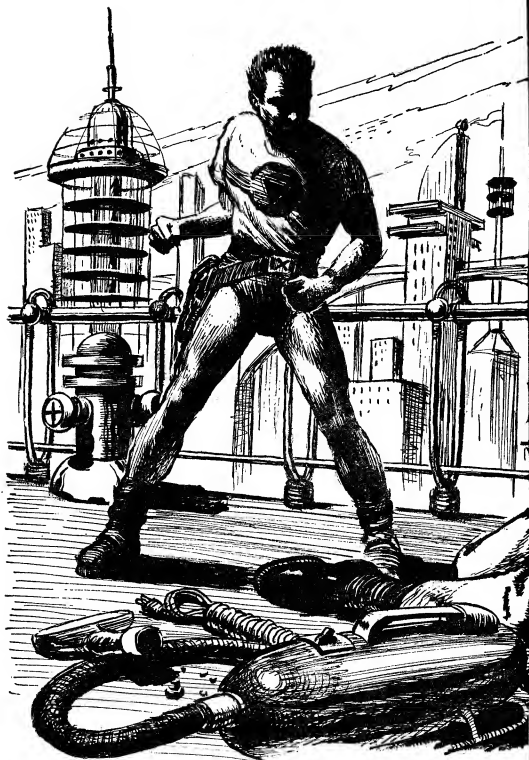
LIVING as we do in a world laden with gadgets and surrounded on every hand by the complex miracles of scientific achievement, you might think that science would be a subject of more popular interest than it is. We can see it changing the future right in front of our eyes. Why, then, is there such a surprisingly low potential interest in the field? The answer, naturally, is that too rarely is it made entertaining. People want to be entertained, even during the process of education. While this can't necessarily be done in professional education, it certainly can, and should, be done for popularization.

We all know the drama and punch that can be associated with scientific discovery. But too rarely has this been communicated to an audience. Radio seldom succeeded in this noble endeavor, but it looks as if TV which is setting the pattern for other similar programs. It embodies all the emotional thrills of a science-fiction story or a detective thriller. Lynn Poole, writer and master of ceremonies of this show, has learned how to take the most prosaic scientific events and dress them up for drama.

To show the scientific way of measuring fear, he arranged as spine-chilling a system as can be imagined. He arranged to have a girl seated in a chair with various electrodes for measuring heart-beat, blood pressure, pulse rate and other physiological quantities, attached to her arms and legs. These electrodes were connected to instruments which could be easily read and which in some cases gave audible sound reactions. These would show the extent of fear.

Then on impulse he abruptly threw a harmless blacksnake in her lap!

The result was amazing. Not only could the TV audience get the sense of shock she received through her terror-stricken screams, but the instruments went mad, showing how her blood pressure shot up, how the adrenalin affected her metabolism as fear-stimulated glands shot it into her blood stream. This slightly sadistic (but effective) demonstration doesn't set the pattern for all events, but it is indicative of how dramatic science can be! Imagination can make good use of TV for scientific demonstrations—even if they are hair raising!



The man didn't want a vacuum cleaner. He said so

WHEN BETTER BUDGIES ARE BUILT

**In 2351, vacuum cleaners will be old stuff.
Budgies will be the thing. But one and all
your troubles will be over — or just starting**

I'D WALKED about twenty miles. It was hotter than a Sergeant with a hot-foot. And the vacuum cleaner I was lugging had started to weigh a thousand pounds. Ever since graduating from the University of California, I'd been a very successful vacuum-cleaner salesman, one of the best in fact. They'd started saying around the offices that Marty Dunstall could sell ice-packs to Eskimos, cigarette lighters to the Devil, and hot sauce to Yvonne de Carlo. Stuff like that.

Anyway I was good.

But today I was blue and on the verge of heat-stroke. I rang the doorbell of this little innocent-looking white cottage and a nicely stacked blonde in a starched dress answered the door.

"Come in," she said, partly with her mouth and partly with the rest of her. "I'm interested—already."

I was in. I tried to keep my mind on my spiel, while she stood close to me and all the time the pressure was

By Bryce Walton



rising in me like in a pressure-cooker, and my forehead was getting slippery. A nice, quiet, cool little cottage with vines dwindling down the pastel walls and a couch squared around two whole walls of the room. But all this isn't really important any more. Because I never saw that blonde again, nor the house.

I emptied a sack-full of dirt in the middle of the rug. Then I went over to plug in the Drakeson Never-Fail Vacuum. I hesitated while I bent over there looking at the blonde's legs, but I was thinking of something else. All at once, I remembered how that stranger back at the office, some guy named Divers, had given me my Vacuum. I hesitated while I bent over a new job and the boss had said to have Dunstall try it out. Come to think of it, that was an odd incident. Who the hell was Divers, I thought, and also, coming to think of it, this was one very funny-looking vacuum cleaner.

It was bulky and fat in the wrong places like a "do you want to lose five pounds a day" ad. I looked up. The blonde was looking down at me and smiling, and she had one hand on her hip. Nice lips too, cushiony, pouting a little.

"This is a new-type cleaner," I said, "and fortunately for you, you're one of the first ladies to try it out."

"Yes," she said huskily. "I'm pretty bored with the old type."

"You won't be long, madame," I said, and I plugged in the cord. Metal rang in my head and all at once that nice room began to look like the inside of a steam bath. I heard a scream, and all I could see was the blonde's eyes widening at me like spilled wine on a white tablecloth. I tried to yell, I tried to move—I could do neither. A wavering curtain of zig-zagging light shot around me and my hair

crackled like puffed wheat. And I couldn't see that room any more, and worse yet, the blonde was just a memory. I felt like I'd grabbed hold of a high-tension wire. A high shrill head-splitting whine was growing higher and higher and I stretched with it. Any minute I knew I was going to snap, pop, split, fly in a million pieces.

And then my mind went as blank as a Christmas turkey's.

I WOKE up. My head felt like a busted orange crate, and when I moved a little I felt like dropping right back down into that pleasant darkness from which I'd just come. When I opened my eyes, though, I forgot my head and the rest of me.

I was someplace else. What I was seeing was odd enough, different enough to give me a chilled feeling. The way you feel in the night when you've been having a nightmare and you wake up and you don't know for sure that you're awake because some of the other stuff still hangs on....

I sat up, and a useless paralyzing panic grew inside of me all the way to the creeking hair on my head. Indecision and doubt sparred inside of me, and I sat there listening to my heart rapping against my throat.

A guy stood there looking down at me. He was about six foot six, proportionately built, with a torso like a gladiator's and blond hair that came down to his shoulders. His face was shaped metallic tables suspended from was a room like you might find if you walked inside the frame of one of those modernistic paintings at an art show. All bright angles and odd-shaped metallic tables suspended from the ceiling with wire. Light oscillated from the walls and that was pretty and pleasant—if you had any idea where you were, why, and how.

"Get up," the man said.

I sat there. "What the hell's going on?" I said.

He grabbed me and started using me for an exercise boy, and then he propped me up against the wall. Behind him, through the wall which was all glass, I saw a city right out of Captain Video. Spiralling walkways curving like suspended confetti, and bullets shooting along in bright flashes, and people streaming like ants.

I got myself all set to rock Superman back on his heels. I said, "Already you annoy me. You're beginning to get in my hair like peanuts gets in your teeth."

He stared, then reached in his mouth and took out his teeth and examined them, puzzled. They were a nice pair of falsies. I grabbed them out of his hand, and moved around to the middle of the room. He looked pretty funny, handsome and perfect and bronzed, but with his toothless gums gaping like a very old soldier about ready to fade away.

"Shtoonk," I said. "You tell me what's going on, or I hurl these molars right out the window. I don't know what they're made of, but after falling from as high up as we seem to be, there won't be enough left of these choppers to dent a cream puff."

He scrubbed a very nervous hand over his locks and eyed that set of dentures in my hand like a dame looks at her best friend's husband.

"Give them back!" he gasped finally, his jaws sinking in like a busted accordian. "If Ella saw me this way, she would be really lost to me forever."

"Why'd you get rough with me?" I said. "And why drag me onto a movie set—?" But I was kidding myself. I knew I wasn't loose among a lot of phony props.

He reached. "Huh-uh," I said. "No toothies 'till you talkie."

He seemed puzzled. "I thought you people from the past appreciated nothing but violence. I only acted that way toward you because I thought it was polite."

I laughed. "Then it's only proper," I said, "to return your thoughtful gesture of good will." And I brought one up from the general area of my knees. I'd boxed in college, and played football, and this one I brought up from my knees. I sent it at his chin like a bowling ball, like you need a ten-strike and you hate the pins; straightaway, no English. It sounded pretty bad, and his head flashed back and hit bottom and then he was lying there, his breath coming in gurgles like soda pop out of a bottle.

I WENT TO the window and looked out. It was a big city, but it had no resemblance whatsoever to the Kansas City I had departed from so mysteriously. This room wasn't that cottage where I'd been about to demonstrate a vacuum cleaner. And I had a chilly feeling that that blonde was a long way off—somewhere.

I turned. Big Boy was getting up, groggy, and walking like a punch-drunk fighter. He shook his head ruefully. I whispered. "What year is this?"

"2351 to you, Mr. Dunstall. To me—350 A.B.—that is, after the bomb."

I leaned against the wall. "All right," I finally whispered. "What am I doing here? And how did that damn vacuum cleaner do it? And incidently, what's your name?"

"You're here to sell something," the guy said in a peculiar toothless lisp. "The vacuum cleaner was really a time-machine too complicated for you to understand. And my name is Ran-

dolph Wakeman. Now, can I have my teeth back?"

"Nope," I said. "Not until I get all the dope on what's really happening to me, and why." I went over and dangled those expensive choppers out the window. Wakeman was a very vain guy and he winced at the idea of their plunging to destruction. "I was intending," he lisped awkwardly, his toothless gums smacking desperately, "all the time to explain it to you, naturally."

"Okay," I said. "Explain it all—naturally."

"I can hardly talk," he said, "without my teeth."

So I tossed them back to him, and he stuffed them eagerly into his face. He looked better, except that he looked just as scared, and hopeless, and beat.

One thing he explained quickly. He was sales manager for a colossal Department Store called Herbert's. There were only two stores that supplied the population of Mid-America with everything. There weren't any other stores, no small merchants. Efficiency. Two gigantic stores, each competing with the other, and between them, supplying everybody with practically everything.

You get the picture. Imagine Gimble's and Macy's—in four hundred years.

They sold people the same things largely. They competed only for more and more efficient service. And now, according to Wakeman, both stores had perfected the super gadget for ultimate efficiency in servicing customers. Something Wakeman called a BUDGIE. Both stores had been working on it for a long time, both had perfected it recently. First it had been advertised to an eagerly waiting

population as the Budgateer and the Budget Buddy. But then he got to be called merely the BUDGIE.

The BUDGIE, once installed, did everything for the home and the family. Each Department Store had installed the pipes, ducts, tubes, etc., running from the store to each house in Mid-America. Whoever sold the majority of the population BUDGIES first, would have business sewed up for good. Once installed, hooked into the intricate electronic distribution system of one or the other of the two stores, the BUDGIE supplied everything—automatically—and of course everything came from the store that had sold and installed the BUDGIE.

The BUDGIE did everything. It bought all the consumer goods, provided entertainment, saw that everything was delivered on time and in just the right way, including clothing, cleaning, meals cooked and ready to serve, maid service, printing, laundry, painting, baby-care, furnishings, everything.

"And whoever wins this selling race," Wakeman said desperately, "will control all consumer-seller relationship from now on. The other store will automatically have to go out of business. You see, the BUDGIE is suited to each family's income. Once installed, the dials set, the buttons pushed, the switches set—*everything's* taken care of from then on, for life. No more bother with ordering or shopping, no delivery troubles because everything you need comes to you through the supply tubes when needed and it's all done automatically, working directly from the store that installed the BUDGIE. And if most of the BUDGIES sold are, for instance, Webster's BUDGIES, it means that all this service will have to come from Webster's store."

WAKEMAN BIT at his lip. "And for life!" he repeated. "A small down payment and the BUDGIE is paid for over a period of time determined by the average life-span of the owner, plus his average income expectancy."

"Wow!" I said. "What an idea! So now you have to sell most of the population BUDGIES before Webster's store does, or you'll be out of a job, for good."

"Yes," sighed Wakeman. "Unless I want to take some humiliating job working for Webster's, or retire at a very young age on unemployment insurance. I couldn't do anything else. This is a highly specialized age. I've been educated all my life to be a salesman, and now I'm the salesman. This is the ultimate, THE sale, Dunstall. Whichever store sells the most BUDGIES will have made the final sale—whoever buys a BUDGIE buys everything he'll ever need the rest of his life—with *one* purchase!"

"So what's the trouble?" I said. I was beginning to feel excited. My heart was going ninety to nothing. "Get out there with your men, man, and sell those BUDGIES!"

Wakeman whispered. "My men and I have been out for three days. Five hundred of the best salesmen ever developed by the best sales psychologists. And we've only managed to sell a few BUDGIES. We've got to sell at least seventy percent of the population BUDGIES. Something's the matter. Sales resistance...it's natural. People know how important a BUDGIE will be to them. That when they buy a BUDGIE, they're really buying, all at once, everything they'll ever need for the rest of their lives. Naturally there's extreme sales-resistance."

"No such thing as an unbreakable sales-resistance," I said.

"My store—Herbert's—" Wakeman

said, "depends on my sales force, and myself. The Store, its thousands of employees, depend on it. But we can't seem to sell enough BUDGIES, not nearly enough!"

"You've got to unload those BUDGIES, man," I said.

"I know! Webster's haven't even bothered to advertise, and—"

"How about this Webster outfit," I said. "They selling BUDGIES?"

"That's what I was starting to explain, Dunstall. Webster's haven't even *tried* to sell BUDGIES. Not a man in the field. They seemed to have known from the start that sales resistance would be so high we couldn't sell enough BUDGIES. They just sit around and laugh at my efforts."

"They've got something up their sleeve," I said. "Maybe they know you can't sell many BUDGIES. But they damn well know they *can*."

"That's just it. And they're going into the field to sell their BUDGIES tomorrow!"

I stared at Wakeman. Now I saw it. "You went to all the trouble to grab me out of the year 1951 and bring me here into the future—so I could give you some tips on selling BUDGIES!"

Wakeman nodded. "Time-travel was perfected some time back, but its use is illegal. I was desperate, so I took one of the time-machines out of the storage house of our store, and sent a man named Divers back to your time, with another machine. Divers looked around until he found what he thought was the most dynamic sales force in operation in your time—and he picked out the best salesman among the group, which happened to be you, Dunstall. The vacuum-cleaner was, in fact, a time machine—"

"But you guys should be better salesmen," I said. "Four hundred more years of experience..."

"Not that simple at all," Wakeman said. "I made a study of your time, when I was doing some research once for the Store. Selling reached its apex of efficiency during the mid-twentieth century. Believe me, Dunstall, you boys were real salesmen. We've lost the aggressiveness, the audacity, the over-riding self-confidence, the egotism, the unconscious psychological factors common to your time that made salesmen so highly effective. Things like hostility and sadism on the part of the salesmen, and the frustrations and masochism and gullibility on the part of buyers—"

"Wait a minute," I said. "Let's not get too clinical. What do I get out of this?"

"A gadget," Wakeman said. "Something common to us but which in your time will soon make you a fortune. We'll return you to your time, and you can take a gadget with you, and the plans for it."

"What kind of gadget?"

"Any kind. Any kind you think would be the most valuable to you. And if you don't get me out of this situation, you'll never go back to your own time!"

"Okay," I said. "Fine, Wakeman. Let's get at it. First, I'd like to talk to your sales force. And I'd also like to see this BUDGIE, and a complete breakdown on it, all the details. I'd also like to try out a few sales myself, and also I'd want to see the ads you been running. I can sell anything to damn near anybody, but first I've got to know the whole setup, you understand what I'm driving at?"

"Yes," whispered Wakeman. He took a letter from the top of one of those suspended metal tables and handed it to me. "I just received this this afternoon. It presents some sort of complication, and frankly, I'm scared."

I TOOK THE note and read it. Then I was scared. "Is this the real dope?" I said. Wakeman nodded. "Doctor Lietencratz who wrote that note is one of the most noted scientists in Mid-America. He did most of the basic planning on the development of the BUDGIE, and for the past year he's been working on robots. That's a known fact. He's primarily a cybernetics specialist—"

Again I was reading the note:

Dear Mr. Wakeman: I, as a scientist responsible to the people of Mid-America, have committed a grave and what might prove to be a fatal error in dealing with your competitor, Webster's Department Store. And more specifically with a gentleman there by the name of Max Gaer. Believe me, as things stand now, you have absolutely no chance of selling BUDGIES in any amount compared with the BUDGIES Webster will sell. Actually, what has happened has made the sale of BUDGIES comparatively unimportant. I cannot go into further details, except when I see you personally—a step I desperately urge you to arrange immediately. Come to my laboratory at once! Suffice to say that my terrible error lies in having put into the hands of Max Gaer five hundred robots against which the best *human* salesman will be totally helpless. Please contact me at once. Even the selling of BUDGIES is no longer important. These robots can sell *anything*. I'm awaiting your visit. May I again stress the urgency of this crisis? The welfare of Mid-America as a Democracy and a free-thinking institution is at stake.

Yours respectfully—

Doctor Boni Lietencratz

I handed the note back. "What does that really mean when translated?" I asked.

Wakeman said, "We're going over there right now and find out. Ah—that is, if you're interested."

"I'm interested," I said. "If I can't drum up a way to outsell a bunch of mechanical men, then I'll go back to college."

En route to see Doctor Boni Lietencratz, in a projectile that hurtled along a monorail above that endless city like a bullet, Wakeman pointed out the Herbert Department Store. All I could see was a gray cube about ten miles square and about twice as high as the Empire State building had been back where there had been an Empire State Building.

"Of course the only thing compared to it anywhere on Earth," Wakeman said, "is Webster's. No one really knows any more. Sometimes Herbert's is the bigger and has more workers, and sometimes it's Webster's."

My hair was tingling. We were going about five hundred miles an hour, and I felt about as permanent as a tenant without a lease. This guy, Wakeman, might not be able to use aggression the way we did back in 1951—and maybe, to him, working a guy over was just being polite—but he had me on one helluva spot. Either I played ball—or I'd be stuck in 350 A.B., and from what I had seen and heard about 350 A.D., I didn't want any part of it. It wasn't all negative, however, but that didn't make the possibility of failure on my part any easier—my getting a gadget. I had to get back to 1951 for a gadget to do me any good. 350 A.D. was lousy with gadgets.

In fact, as it turned out, the ability to distinguish between a gadget and a human being was strictly coincidental.

The stream-lined job we were traveling in stopped, and we stepped through the door, through a wall and were in a hallway. We went down a long tubular metallic corridor, and into Doctor Boni Lietencratz's combined laboratory and living quarters. We stepped into the latter first, the laboratory being on the floor below.

"How do you do, sir," I said, and stuck out my hand. The big handsome guy in a monkey-suit only looked at me, very coldly, and stood there. "That's a fine attitude," I said. "Snobbery."

"That isn't Doctor Lietencratz," Wakeman said. "That's a servant."

I turned. Lietencratz came running in, a little bouncing man with grey hair, a long beak and rosebud lips. He hopped around all the time and his hands moved constantly, nervously, in the air, over the surfaces of tables, chairs, the walls—like a couple of mice.

"This is Doctor Lietencratz. This is Marty Dunstall, ace salesman for Never-Fail Vacuum Cleaners—from the year 1951."

"What, what?" Lietencratz whispered. "You've used the—*time machine?*"

"I was desperate to sell those BUDGIES," Wakeman said. "And I figured that the psychological approach of that day might break down sales-resistance—I figured a representative from that period of super salesmanship would be able—"

"All right! All right! That's unimportant now!" Lietencratz looked haunted. His face was mottled, and his eyes were sunken. "The BUDGIES don't matter a great deal now. Ah—how about a drink, gentlemen?"

"Great," I said. I said I wanted

a Scotch and soda, and Wakeman said he wanted a gin and bitters. I had hardly gotten my order out of my mouth, than the servant was there again, with the drinks tall and cool on a tray.

"Thank you, Morris," Lietencratz said. But I was staring at Morris' face. His eyes—they seemed about as friendly as two members of a Congressional Investigating Committee. No—not unfriendly exactly. Just—glassy—cold—

"Now what's all this scare business?" I said. "This robot salesman routine?"

LIETENCRATZ bristled. "Please don't speak disdainfully of my robots!"

"You were the one who didn't seem happy about them," I said. "In that letter. I'm here to outsell Webster's. I'm here to sell BUDGIES—I'd better damn well sell BUDGIES! You can't tell me a bunch of cogs and wheels can outsell a sales-hep human!"

"Dunstall doubts the efficacy of your creations," Wakeman said.

My drink was gone. I started to make the fact known and there was Morris standing there with a renewal. I was startled. The servant's blank staring eyes gave me the creeps.

Lietencratz sighed. "Hard to tell, isn't it, Dunstall? But you see Morris is a robot."

"A what?" I said vaguely.

"A robotic, a synthetic man. Laboratories have been trying to develop them for centuries, dreamed about them. In your time, Dunstall, they had very elemental types of robotics. Plays, literature, all full of the concept. Surely you don't claim to be surprised..."

I figured Lietencratz was a real flip. Morris might have a screwy look...but I figured I could tell the

difference between a human and a gadget. "Ah—it looks too human. HE looks too human," I corrected myself. "My idea of a robot—"

"Cogs and wheels," Lietencratz smiled wanly. "And X-ray eyes and all that nonsense. You wouldn't understand, Dunstall, the principle of these robots I've created. However, it's mainly an outgrowth of cybernetics, and advanced work in that field—proving that a human being and highly complex machinery differ only in complexity. I've finally succeeded in mechanically duplicating the human nervous system...to a degree, that is. But not in nearly so complex a form. And of course I can't give a robot a human's capacity for self-determination...or, let us say, a soul."

"Okay," I said. "So what's the big fuss all about? You made a bunch of super salesrobots, and sold them to Webster's. I still say that I can sell more BUDGIES than your robots."

"No," Lietencratz said in a hoarse whisper. "You can't. But selling BUDGIES, that isn't the thing that frightens me so much. They can sell ANYTHING. Ideas, for example. *Ideas...*"

I swallowed hard. I didn't know yet what he was driving at—but the way he had said that gave me a good solid case of the creeps.

I went over there and touched Morris' arm. The arm felt human. I still wasn't exactly convinced. I let out a yell, though, as Lietencratz pulled something in the vicinity of Morris' neck and Morris' head raised a foot higher on a kind of telescopic spindle and began to twirl like a top.

I gulped the rest of my drink. Lietencratz pressed something else and then the robot's head dropped back down to normal and kept on looking at me.

"The reason," Lietencratz said,

"why no human being can outsell these super salesrobots is that they're so highly and intricately specialized." He pointed at Morris. "Like this robot. I designed Morris to be the perfect servant. And no human being could possibly compete with it—as a servant."

Lietenratz wiped the sweat from his forehead and his hands that darted around in the air. "I built these robots for use...for the use of civilization as a whole...for strictly beneficent purposes, you see. With this goal in mind, I planned with great care. I incorporated in them all the known psychology of salesmanship. I figured that robots made into perfect salesrobots, specialized in convincing people, would be the most useful. It's easy, I thought, to present truths to people, but not so easy to sell them truths that would do them the most good."

WAKEMAN looked ill. "But why did you sell those five hundred robots to Webster's?"

"I needed money, financing. It took an awful lot of capital to build all those robots. And I knew that either Webster's or Herbert's would be interested, from a purely commercial motive. Later, I thought, after the BUDGIES were sold, the robots could be used to sell more valuable educative things to the public. Ideas, for instance—but good, beneficial ideas! That was my error. It's fine to have agencies that can sell people anything. But the trouble is—they can sell the wrong things just as easily!"

"You mean this individual, Max Gaer," Wakeman said.

"Yes, yes, yes!" Lietenratz shouted, sounding like a hysterical housewife. "Working with him, working with those robots, I've had a chance to observe him. I don't know how he's

escaped the re-conditioners. Yes, I do know. His important position with one of the biggest commercial enterprises in the world, in all of history. Anyway, gentlemen, I'll tell you what he is! A paranoiac, a power-mad fanatic, a man suffering from delusions of grandeur. A real fascoid personality, as they say, a recognition-hungry, obsessed individual!"

"It isn't Webster's that's bad, of course," Wakeman said, "nor the robots. It's Gaer and the use to which he will put the robots?"

"Yes, yes, yes!" said Lietenratz. "Those robots are perfect, perfect, I say! Super super salesrobots! They're built with a special tape insert so they can be conditioned to sell any objects or combination of objects, including ideas, concepts, which most people have learned to regard as THINGS. No human can resist them. They can break down any kind of conceivable sales-resistance. They operate on such a high mechanical certainty factor that it's impossible to resist them. They have a complete recorded pattern of approach fitted to any possible variable in a human reaction pattern."

I said I needed another drink. I'd hardly gotten the words out before Morris, the perfect servant, was standing there with a fresh Scotch and soda.

"Perfect, perfect!" moaned Lietenratz. "A machine can't make a mistake. And these robots have learned all the rules in selling BUDGIES. Physically, they're designed for the greatest possible initial appeal to a potential customer. All, or most, of the customers to whom basic ideas must be sold in a feminine culture are, of course, women. So these robots have been designed to have the greatest sex appeal, physical presence, poise, charm—equipped for the perfect ap-

proach to housewives..."

Wakeman almost sobbed, his thinly papered nervous system breaking out all over like a red rash. "These robots—are really *that* good?"

"Perfect, perfect! But who sells the most BUDGIES won't make any difference! Can't you see? Selling the BUDGIES is just a blind for Gaer! They'll sell BUDGIES, certainly! Sweeping customers before them like a plague. But also, Gaer's conditioned those robots to sell IDEAS, you see, you see? He's got a dictator complex. And I happen to know that he's going to start selling people the idea that he's a sort of—ah—god!"

"You don't need robots to do that," I said. "Hitler—"

Wakeman yelled. "They're going out to sell in the morning!"

"I know, I know!" moaned Lietencratz.

"I still don't admit that these robots can sell better than I can," I said. "But don't you have any more robots? We can send out robots too. Outsell Gaer's robots. Give me a little time with these robots. I'll whip 'em into shape. If Gaer's robots can sell anything, our robots can sell anything better!"

"We admire your attitude... characteristic of your age," Lietencratz sighed. "I have more robots, of course, a number of them which weren't completed when I sold those five hundred to Webster's. But they haven't been conditioned yet."

"Then let's condition them," I said. And I slapped Lietencratz on the back. He coughed. "I'll give them some ideas Gaer or you never heard of. I've got a personal little technique of my own. Now you take your initial approach to a dame. You work it the same way as if you were approaching one in a local bistro. You take the

attitude that this broad—"

"Wait, wait, wait!" Lietencratz screamed. "Fools, idiot! You don't understand! Listen—I don't have five hundred robots left. Only about a hundred, maybe a few more. What if we did have some added trick so they could outsell Gaer's robots? We couldn't be that superior, even if we were superior at all! And besides, I haven't gotten the tape-spools installed in them. I've been afraid—"

"Fear never gets you any place," I said. "Fear has no place in selling—"

THE DOORS behind me burst open.

Lietencratz screamed. Wakeman stepped to the wall and stood there. I stood right where I was. "Gaer—" Wakeman whispered.

Gaer was a bright kind of guy, if you know what I mean. Big and broad and bright, shaved down to a gun-metal luster, brown and healthy from plenty of sun—there were no creases in his face and his dark hair glistened and he was redolent of masculine talc, and he glowed like grouped Martinis before breakfast.

His eyes, set close together and separated strikingly by a Roman nose, were bright too, bright and black and eager and—mad! Not outright crazy, but booby-hatch material right away. Sly—the smart, planning, scheming kind of flip. Like a fanatic who has made a success out of his own nuttiness.

And he had a coiled and complex-looking instrument aimed at all of us, and I was damn sure it wasn't a futuristic water-pistol.

It wasn't. "You gentlemen," he said, "will shut up and listen to me, and not cause any trouble. Otherwise, I will burn all of you. Understand? I'll burn all of you, and throw what's left of the three of you right straight down

the garbage disposal unit."

One look at Lietencratz and Wakeman and I knew they believed what Gaer said. So did I. Lietencratz's face was crunched up like a squeezed half orange. His hands were still, hanging in the air on either side of the half orange. Wakeman looked tight and scratchy like the right string on a fiddle. My palms were cold like a subway wall.

"The three of you," Gaer said, "are going to stay right in this apartment until tomorrow night. Then it will be too late for you to do anything. I'm not taking any chances. You might think up something that would interfere with my plans."

"What are your plans?" Wakeman said.

"You won't approve," Gaer said. He laughed. I shivered. His laughter sounded like the spilling of rotten fruit. "This social system is static, useless and dull. So I'm changing the whole thing, and I'm doing it in a day. Thought-control, gentlemen, I've got it. Thanks to Doctor Lietencratz here. He's told you about his robots, that are now my robots. At the risk of sounding melodramatic, gentlemen, I'm saying that I'm going to sell myself to the people, using Lietencratz's robots, as an absolute dictator, a god-man. And I'll soon have a social system that will make sense. Those robots will convince the people that our whole social system smells, that democracy smells, that I'd be the perfect dictator. Five-hundred robots operating twenty-four hours a day, five minutes at the most per person. It won't take long.

"And don't forget, those sold on the idea will help break down the resistance of the others! And then—it's all over! I'll rule the world. I'll have robots marching into the Kremlin and convincing Joe Stalin XII in five min-

utes that he's an inadequate ruler, and that he should hand the whole Politburo over to me!"

"Pal," I said. "You're as nutty as an almond bar. What you need is a quick one-way ride in a booby wagon—"

"Who is this obnoxious character?" Gaer said.

I would have jumped Gaer, but that ray gun, or whatever it was, was a lot more threatening than any kind of weapon I'd ever seen before.

"A friend of mine," Wakeman said. It was illegal to use the time-machine; then evidently Wakeman wanted to keep the facts about how I got into 350 A.D. a secret.

Gaer shrugged. "Well, the three of you are staying here. By tomorrow night my salesrobots will have sold practically the whole population of Mid-America, not only BUDGIES—but also a few other ideas I want them to have."

"But those robots could have been such a wonderful benefit to mankind," whispered Lietencratz.

Gaer laughed. "You blue-nosed old hermit. Even the work you did on the BUDGIES—even those BUDGIES will help my plan, Lietencratz. They do everything for the home once they're installed. And they're channeled into Webster's Department Store. I'll make Webster's my headquarters, and I'll have those BUDGIES fixed so they'll deliver things I want delivered. Between the BUDGIES that furnish everybody with everything from my headquarters forever, and the robots that can sell anyone anything—I'll have a perfect setup, gentlemen, believe me."

He took a few steps forward. "Now I'm going to lock the three of you up in this closet. Then I'll set the automatic doorman to 'do not disturb', and that's good, as you perhaps know,

for at least twelve hours."

"Why don't you call the cops—ah—enforcers of the law?" I asked.

LIETENCRAZT groaned. "For what? They couldn't touch one of those robots. I imagine Mr. Gaer has taken care of that."

"Yes indeed," Gaer said. "Special tapes for each robot, conditioned to sell one very special idea to any Peace Guard they might encounter. I've got those robots geared to sell any Peace Guard they meet for five minutes the idea that I'm the boss."

So then Gaer started herding us into the closet. It wasn't a large closet, and the whole idea of being crammed in that hole for twelve hours was hard to take. And it also meant that Webster's and Gaer and the robots would win the BUDGIE selling race, and something else that was beginning to scare me—even though it wasn't my age. And I was here to prevent Webster's from winning the BUDGIE selling race—or else. With my choice of any gadget I wanted to take back to 1951 with me if I won—and the very unpleasant prospect of staying in 350 A.B. if I lost—I was suddenly very determined to beat Webster's and especially Gaer, a gentleman to whom I'd taken an immediate dislike. If ever I'd met a real shmo, it was Gaer.

I heard a sound in the kitchen, a very light sound that Gaer didn't hear. I had an idea.

Casually I said to Lietencrazt. "Why don't you call Mr. Morris?"

"What? What?" Lietencrazt said.

"The perfect servant," I said, while Gaer kept on herding us across the room toward the closet. "Mr. Gaer doesn't look too happy here as a guest. And if Morris is a perfect servant, he would be bound to want to make Mr. Gaer more comfortable."

Lietencrazt made a peeping sound

like a happy little bird. "Morris," he said. "Oh, Morris."

"What—who are you calling?" Gaer yelled.

Morris stood in the doorway, politely. Gaer twisted toward him. There were four of us now, and Gaer had to cover three sides of the room at once. I said: "Gaer's tired. He's a guest of yours, Lietencrazt, and he's tired!"

"What are you talking about?" yelled Gaer.

Morris took a few tentative steps toward Gaer. Lietencrazt said, "Morris! Our good guest, Mr. Gaer, is tired. Mr. Gaer should be treated right Morris, and he's tired—"

Gaer made a gesture with the gun. I gave that table suspended from the ceiling with silver wires a big shove, and one corner of it caught Gaer right in the solar plexus. Gaer wind-milled across the room, trying to get a line on somebody with that superman pistol, and all the time Lietencrazt was hopping around, screaming, "Morris—treat Gaer right. Better put him to bed. See that he gets a nice long rest—"

Gaer was crawling on the floor trying to get his breath back as Morris went for him, saying, "Yes, sir, yes, sir." A very polite gadget, that Morris.

Gaer was getting to his feet and I threw a chair. It caught the pistol arm, swung the weapon around, and then Morris had him. I ran in from the back and twisted the weapon out of Gaer's hand. And all the time Morris was gathering Gaer in his arms, crooning to him.

Gaer was big and tough, and he had that added strength of fanaticism. Maybe Gaer wasn't really so crazy. In 1951 he wouldn't be considered crazy. I thought. I never did find out, but I have an idea that in 350 A.B. there were plenty of guys like

Gaer—only in an age that's so smoothly run with machines whirring everywhere, it's hard for a guy like that to express himself, to really make his beliefs known.

Anyway, he was plenty tough. He bent forward and I felt myself doing an awkward ballet leap right into the wall, and from there I bounced to the floor. Gaer managed to get a drop-kick in, using my head for a football. Morris was crooning and trying to get a good solid hold on Gaer. Lietencratz was hopping up and down and yelling suggestions to Morris as to how he could best display his best servant qualities. Wakeman got the lead out and charged in to help, and Gaer landed the best haymaker I've ever seen on Wakeman's glass chin.

Wakeman folded like an old rusty hinge and stretched out on the deck like a guy who hadn't had any sleep for a week.

BUT BY then Morris, the perfect servant, had things well in both his capable hands. Lietencratz was saying, "Put him to bed, Morris. He needs rest. See that he stays in bed and gets a good rest."

"Yes, sir," said Morris.

"Why you—" Gaer shouted, but that was all. Morris was squeezing him pretty tight.

"That's right," said Lietencratz. "Don't hurt him now, Morris. He'll resist. But you put him to bed. It's for his own good. His own good."

"Yes, sir," said Morris. He had Gaer off the floor and cradled in his arms like a baby. "Please, sir, you need a long rest, Mr. Gaer. I'm going to put you to bed. It's for your own good you know, sir."

Gaer was screaming and shrieking as Morris got Gaer hoisted just right and carted toward the bedroom.

Gaer's arms waved crazily. His face was gargle-medicine red. "Now, now, sir," I could hear Morris saying politely. "Just be quiet while I get your shoes off. You must rest. I'll give you a sedative, sir—"

"Let's get out of here," said Lietencratz frantically. "Get below and see what we can do about those other robots of mine."

"What about Wakeman?" I said. "I'll take him along." I lifted Wakeman, threw him over my shoulder, and we went down in an elevator to Lietencratz's lab on the floor below. By then, Wakeman was stirring a little and I propped him up against a wall.

"There are the rest of my robots," Lietencratz said. "Only a hundred of them. Even if they sold BUDGIES twice as fast as Gaer's robots, Gaer would still get to most of the population first. Nothing we can do, I tell you, nothing! Democracy, freedom, everything gone—"

"We've got Gaer up there—" I began.

"Yes, but he won't be there long. We can't use violence any more."

"We could bump him off," I said, "and bury him somewhere. No one would ever know—"

Lietencratz was staring at me with eyes bulging so far the draft in the room was drying them off. His lips twitched and for a minute I thought he was going to pass out. "You would—*kill* him?"

I shrugged. I hadn't really meant it, I guess now, but on the other hand, a guy like Gaer was a very dangerous fellow. "What else?" I said.

"There's got to be some other way," Wakeman said. He looked straight at me. "And you're the man to find a way out, Dunstall. Back in your time, you fellows had a certain intensity and a way of short-cutting circum-

stances. You could sell things that it now seems incredible anyone could have been persuaded to buy. You can figure a way out of this, Dunstall, if any one can. And someone has to."

He didn't add the rest of it—that either I came up with something, or I remained in 350 A.D. Maybe nobody would realize what a lousy prospect that was, without being there. Where there's very little that's familiar, and people and machines are all mixed up so that you have trouble telling the difference, and everybody's about ready to be plugged in, along with a BUDGIE, to a big department store for the rest of their lives—brother, I wanted out of 350 A.D., and I wanted out of it fast!

And all the time I was staring at those robots of Lietencratz's. "Dames," I heard myself whispering. "Beautiful broads, all of them—"

I looked at Lietencratz. "They're all women," I said. I had a peculiar sensation in my stomach. All hundred of them seemed a kind of perfect blend of Betty Grable and June Allison and Jane Russell or—pick any other three you want. These hundred robots had everything.

Then I got the creeps. They were all looking at me, all hundred of them, sitting demurely in rows. All looking at me with—dead, dead eyes.

"YES, YES!" Lietencratz was saying. "The others, the ones I sold to Webster's, they're all male robots—I mean their surface appearance is male. They're all sexless, of course."

SOMEWHERE in the bottom of my alleged brain, clickings and whirings were occurring, but right then I just had one devil of a headache.

"We've got to work fast," Lietencratz said. "We've got to condition these robots to sell. We've got about eight hours left. Gaer's robots will be

out selling in the morning—BUDGIES and the IDEAS that go with them."

"And even if Gaer's still imprisoned upstairs," Wakeman said, "the robots will be out selling anyway. Nobody else over there knows what Gaer's really up to. If Gaer doesn't show up in the morning, his robots will be sent out anyway. I'm sure that's all been arranged."

"But we've already agreed," I said, "that we don't have enough robots here to compete with Gaer's robots. Even if our robots sold twice as much."

"That is so unfortunately correct," Wakeman said.

"But we have to do something," Lietencratz said. "At least we can try. Everyone these robots sells a BUDGIE to, they'll at least be free of the influences that Gaer's robots will sell to everyone else. We'll have a small resistant minority group, the core of a resistance organization that could fight against Gaer's dictatorship—"

"But that would be squelched damn soon," I said. I kept looking at those robots, those luscious formations of feminine pulchritude—"And anyway," I said, "these robots are all feminine robots. They'd have to sell to housewives. If I know anything about salesmanship, these women couldn't sell very many other women BUDGIES, or anything else. I don't care how you condition them."

"Maybe you're right there," Lietencratz said.

"Why did you make these robots look like women?" I asked.

"I thought it would be logical. I made five hundred that resembled men. I thought I'd make five hundred more to resemble women. I thought it would be a well-balanced procedure—"

"Yeah," I whispered. "It might at

that...it might at that..."

Lietenratz was scurrying around some big filing cabinets, throwing spools of wire and tape out over the floor. "Hurry, hurry!" he was chirping. "Help me! We've got to insert these tapes and wires. They'll fix up these robots like Gaer's robots. So they can sell anything, to anybody, within five minutes."

"Don't be a sap," I said. "We've already agreed that won't work. This minority resistance business, that's just failure with a neat excuse hooked on. The idea is to stop Gaer's robots. Stopping Gaer won't work, even if we could. We've got to stop his robots."

"Impossible, impossible!" moaned Lietenratz.

"I'm afraid he's right," Wakeman whispered. "It looks like the end—and even you can't figure a way out of this one. Dunstall. Which, I might add, is too bad for you. The conditions still exist for you. I haven't gone to all the trouble to bring you here, risking arrest and other indignities, for nothing, Dunstall. There isn't any way out of this hideous situation—but *you've got to find a way out!*"

I went over to Wakeman. "Listen, pal, I didn't ask to come here. And neither would anyone else, if they knew what kind of a set-up it was. You're probably desperate, so I'll excuse your lousy behavior. You're acting more of a shmo than Gaer is, but I can see the spot you're in. Okay—I think I've got a way out."

"What, what?" Lietenratz said, and he stopped throwing spools of tape and wire over the floor and looked up at me.

"It's a long shot, but it might work. But we've got to record some stuff on some other tape. Vocal stuff, that's all. No brain work. Get a dame somewhere and let's get this stuff record-

ed. Can we do that in the next eight hours?"

"Do what?" Wakeman said.

"Get a dame with a nice but emphatic voice. We'll record a few lines, that's all we'll need. Also, we'll need a sales-area map. I want to know the sales routes these robots of Gaer's will probably follow. Also we've got to find vacant apartments and houses in these areas, you understand, men?"

WAKEMAN nodded without enthusiasm. Lietenratz nodded as though he were being forced to agree with a moron.

"Fine," I said. "Now get a girl in here to record a few lines. Lietenratz, are these robots capable of moving around, acting like human beings now, or do we have to fix them up so they'll do that too?"

"We have standard spools for that," Lietenratz said. "That can be inserted in a few minutes."

"Then let's get started," I said. "And let's work fast. I want to get out of this lousy year."

This was it. Everything was set. Everything had been taken care of the way I wanted it. If it didn't work, Wakeman wouldn't be out anything but his job, his reputation and—depending on what the new Dictator, Gaer, thought of him—his life. And I wouldn't be out anything but the privilege of living out my life back in the twentieth century where I belonged, and with a gadget from the year 350 A.B.

It hadn't been easy. I was a wreck, my nerves as scratchy as the last string on a violin, and my face was something strictly to frighten goblins.

We'd had to find a bunch of vacant houses and apartments, and that hadn't been easy. We'd found a few. We'd made up the rest by taking over houses and apartments left tempo-

rarily vacant by vacationers, some others being renovated, and so forth.

It was morning and my little communication device that Wakeman had given me, and with which I could keep in touch with Wakeman and Lietencratz, told me that already Gaer's robots were on the march. They could sell anybody anything in five minutes. First they would unload a BUDGIE; then, in another five minutes, they would unload the IDEA that Gaer was a god, a dictator, the big boss of a new and greater social order.

I waited. And out there at the front door, one of Lietencratz's beautiful female robots waited. We'd given each of Lietencratz's robots a name and posted it in the regular places on whichever apartment or house we had taken over.

To check on results of my plan. Lietencratz stayed with one of his robots in one of the other sales sectors, and Wakeman with one in another sector, and I was here with a robot in this sector. We had a robot station in each sector, making each of the hundred sales areas covered by one of our robots. That meant that each one of our robots would have to take care of a hundred of Gaer's robots.

I hid behind a door and waited, and the robot I was with stood by the front door waiting for the doorbell to announce the approach of one of Gaer's super salesrobots.

So that's the way it was. Me waiting. And the robot waiting at the front door. All over Mid-America, which wasn't very big any more, I'd been led to understand, were the five hundred robots of Gaer's. Robots that could sell anybody anything. It gave me goose-pimples, thinking about it.

I'd never thought good healthy

salesmanship could come to this.

And also it was hard for me to keep on believing that this beautiful housewifely looking creation was actually a robot. There was never a better looking, better stacked brunette anywhere, any time. It stood there demurely in its crisp, fresh, domestic housewife's uniform, like millions of other housewives in Mid-America. Only this one wasn't the same at all.

I'D FIGURED everything out all right. Top-notch salesmanship depends on deep psychological factors. A good salesman may not know these things consciously, but he knows them. Most sales are made to women. And most of the sales to women are made by men. And underneath it all is the basic psychological inability of women to say "no".

I'd fixed that.

My nerves were jumpy. Tension mounted as I waited. My stomach was turning flim-flams. Everywhere, in every selling area, Gaer's robots would be selling like mad, one customer every five minutes or less. It was about ten o'clock already. My plan depended on only a small percentage of the population being sold by Gaer's robots before—

I leaned forward. The doorbell was ringing. My robot straightened her hair, smoothed her dress down over her phony hips and, in a most feminine gesture, it opened the door.

One of Gaer's handsome sales robots stood there. "I represent—" Gaer's robot began...

"I don't want anything," said Lietencratz's robot.

"That's it, kid," I whispered. Sweat ran down my face.

Behind Gaer's robot I saw a truck containing BUDGIES ready to install. Huge complex machines covered with

dials, indicators, needles. Everywhere one of those monsters was plugged in, people were being plugged into a department store for life.

"You look very fresh and charming this morning, Mrs. Latenbach," said Gaer's robot. Its smile flashed and it started to put its foot inside the door. But my female robot didn't budge. "I told you," it said, "that I don't want to buy anything."

"Of course not," said Gaer's robot in its most charming manner. "That's why I'm here, to point out the reasons why you should buy from me, and also to tell you something about my sales manager, Mr. Max Gaer. I represent Webster's Department Store. And I'm selling the BUDGIE about which you have undoubtedly heard a great deal. I understand your antagonism toward buying. But the BUDGIE will take care of all your buying from now on. You'll never have to worry again about shopping, budgeting, meal-planning, cooking or serving. Webster's BUDGIE does everything for your home and your family. It does everything for the rest of your life— Now—"

I'd like to explain that pitch. All I can say is that Lietencratz was right. That robot **COULD** sell anyone anything. All the subtle things about selling that even psychologists can't explain, that robot had. I was scared, plenty scared. It could sell a BUDGIE to anyone, and it could sell Gaer to anyone. And with Gaer, went ideas no one should ever buy.

The pitch gained momentum. The pitch that would sell anything to anybody. The spiel salesman, including yours truly, have always dreamed of. The irresistible pitch. The only thing was, this customer wasn't human.

And during each planned pause in the salesrobot's speech, my robot would say, "I don't want a BUDGIE."

It went on for a while, one, two, three, minutes. It seemed like a week to me, and my robot kept saying that she did not want a BUDGIE.

I stared. Something was happening to Gaer's robot. Its words were faltering. Its poise was slipping. Its pitch was garbling.

"You tell 'em, kid," I was whispering over and over.

Finally Gaer's robot seemed to droop a little. It whispered in a kind of rising inflection that became a whine. "But, Mrs. Latenbach, you **GOT** to want a BUDGIE!"

"I don't want a BUDGIE," said my wonderful little brunette robot. "I don't want to buy a BUDGIE. I don't want to buy anything."

"But you should—"

"I don't want a BUDGIE."

"But—"

"I don't want a BUDGIE."

"Eeeeeee—ahhhhhhhh!" screamed the perfect salesman. And right there, in front of me, the perfect salesman, the robot that could sell anything to any one within five minutes, flipped its metal cork.

IT SHOOK and trembled and quivered. Smoke curled out of its mouth that flapped loosely in a garbled, nonsensical outburst of meaningless speech to the effect that no one should be without a Webster BUDGIE, that Mr. Gaer was a god, and other things.

Then it fell to its knees and began to cry like a baby; then it stretched out and stared up at the sky, its mouth gaped open, its fingers extended.

I got Wakeman on the commuter strapped to my wrist. "It works, it works!" I yelled. "How's it going in your sector?"

"Perfect, wonderful!" Wakeman was yelling back at me. "This super

salesrobot went berserk and ran away down the street, tearing itself to pieces, throwing pieces of itself in all directions!"

I contacted Lietencratz. It was the same there. Lietencratz was out of his head with ecstasy. "Saved, saved!" he was shouting. "Our democratic society is saved!"

"Now let's get our cute little trick robots over to another sector, and fast," I said. "We've got a lot of salesrobots to eliminate yet."

So that's what we did. By mid-afternoon, with about a third of the population having bought BUDGIES and Gaer as a god and a dictator, we had driven all the five hundred salesrobots as nutty as so many machine-tooled fruitcakes.

According to Lietencratz, the psychologists would take care of that temporarily insane third of the population that had bought Gaer. After a while, seeing that no one else was buying this crazy idea, the fanatical one third would gradually lose the force of the robots' powerful sales-talks.

Gaer flipped too, when he saw what had happened to his big deal. The last I heard of Gaer, they had put him through some sort of reconditioning process, and he came out of it anything but a guy with a dictator complex. He became an elevator operator at the Herbert's department store, and all he ever said was, "Floor

please?" and "Yes, sir." or "No, sir." I saw him once before I got the hell out of that place and time. And, so help me, he looked just like one of Lietencratz's robots!

Anyway, I'd done my bit for Webster's, for Lietencratz and for Wake-man. So they bid me a fond and grateful farewell, which I did not return in kind, and sent me back to my own time, back to 1951.

I think I was pretty smart about my choice of a gadget. Not something so fantastic and complex to the civilization of 1951 as to be wholly impractical. It's simple, but something people will accept to the tune of a few million bucks for Marty Dunstall.

No, I'm not telling you what it is. I haven't gotten it patented yet. But you'll find out. It'll revolutionize this country overnight, and things will never be quite the same again. And I'll bet you'll recognize it when it comes out on the market, and when you buy one for yourself. Oh, you'll buy one all right, you'll hardly be able to help buying one.

It'll mean a fortune for me. But more than that, it means I don't have to sell anything any more. There's something about being a super salesman that gives me a very unpleasant sensation.

There would always be a possibility of my running into a nice beautiful customer who just couldn't be sold.

THE END

DON'T MISS

ROBOT'S REVENGE By E. K. Jarvis

**A GREAT NEW TALE OF TERRIBLE
RETRIBUTION IN BLOOD AND STEEL!**

IN THE DEC. ISSUE OF FANTASTIC ADVENTURES

DIESELS AND DINOSAURS DIE!

By Jon Barry

WHEN LIVING things, in the course of eons of evolutionary activity, can no longer adapt themselves to their environment or when they have become too highly specialized, they die. The fate of the dinosaurs, the monstrous reptilian rulers of the Earth in the dim distant past, illustrates this perfectly. The Ice Age saw their end—and no one mourned. The *adaptable* "shall inherit the Earth..."

The evolutionary process occurs in technology, too. Science, which creates fabulous things, also kills off the weaklings, or restricts them to capacities for which they're suited. A superb example of this law of selection (natural selection?) is the ponderous Diesel engine, analogous, by virtue of its great weight, to the dinosaur.

When the Diesel engine was invented great things were predicted for it, and these great things have come about. Huge trucks are powered by efficient crude-oil-burning Diesels; tugs use them, as do many small naval vessels; stationary power plants use them; and railroad locomotives are literally attached to them. Even automobiles have played with the Diesel engine, but it has

been a desultory flirtation. With the Diesel engine so efficient, why is this?

The answer is simple: like the ponderous dinosaur, the Diesel weighs too much, and so, only where weight need not be considered, as in the application mentioned, is the Diesel used. For a long time experimenters tried to adapt it to the airplane, and they didn't give up the idea until shortly before the Second World War, when they saw that the Diesel was self-limiting because of its great weight. With the coming of the gas turbine this judgment was verified.

Though, in the fields mentioned, it would appear that the Diesel engine is more than holding its own, this is probably untrue. Naturally inertia prevents change, and it will be a while before the Diesel goes the way of all metal—but that it will go is just as certain as that some day all internal combustion engines except the rocket and the gas turbine will be replaced by the electric motor. In the world of the machine as well as in the world of nature, there is survival of the fittest. The Ice Age killed the dinosaur; the Atomic Age will kill the Diesel!

ARTERIES ON ICE • By Walt Crain

THE LONG-AWAITED day when it will be possible to graft human organs from one body to another, is just a little closer. It's still remote, of course, but bit by bit medical advances are occurring in which the necessary ideas are being garnered. And, as is usual, a half dozen fields of technology and science contribute their bits.

For example, it has long been known that food can be sterilized and preserved for an indefinite length of time by being pierced with streams of high-voltage electrons. A commercial use of this process is in the production stage. By a strange coincidence, this very electronic process is being employed to sterilize and preserve sections of human arteries, which are later transferred to living humans. Previously, no known methods were able to keep the tissue sterile for any length of time.

The method of transplanting arterial tissue stems from a treatment for a heart condition which necessitates cutting into the aorta and then bridging the resultant gap with arterial tissue from an artery bank. Previously this frozen-preserved tis-

sue always had germs present, a situation which prevented it from being used in the delicate heart operation. But bombarding the frozen tissue from the artery bank with cathode rays rendered it absolutely sterile (bacteria crumple before electron bombardment), and so it worked perfectly in the operation.

This is but one slight step toward the successful transplantation of other organs and tissue structures from one body to another. Lower animals are able to regenerate their own lost limbs; it is unrealistic to expect humans ever to do this, but it is perfectly feasible to imagine the transplantation of a limb from one body to another in much the same manner as corneas are transplanted. The future looks very bright for this phase of medical technology and, while it has been quite slow in developing, it's impossible to tell when someone will make the revolutionary step that will make it commonplace. Stranger things have happened. Between physical science, antibiotics and the surgery, some new definitions of "impossible" in medical problems are going to have to be formulated!



"Maybe we can make a deal on the pants"

NEEDLE ME NOT

By Guy Archette

No matter how hard Sam tried, it was always the same old story. When the suit was finished, he'd made the pants too short



THE LIGHT affixed to the rear of the head of the power sewing machine brought out the veins in clear detail on the thin bony hands. The machine was silent for the moment because Sam Ready, "Ladies and Gents Tailor—First Class Cleaning and Pressing Done", was sewing the lining on a man's jacket by hand. Sam liked handwork. He found pleasure and satisfaction in having a customer look at a garment and say, "Real custom work, eh, Sam?"

He heard the outside door open and narrowed his eyes against the glare of the reflected light of the sun pouring off the concrete of the pavement. He saw it was a man, but not until the man spoke did he recognize him.

"...Sam!... Hey, Sam!"

Sam's heart sank. It was his brother-in-law, Paul Ryan, and when Ryan's voice held that tone it meant trouble for Sam.

"Yes, Paul?" Sam's head lowered and his fingers busied themselves again at the lining.

"The coat fit and the vest fit..."

"But the pants... They was too long."

"Ain't you never goin' to learn, Sam?"

"I keep forgetting, Paul."

"'Bout time you started remembering. This is 1965, Sam, not 1945. Nobody wears *zoot* suits any more."

Sam tried a parry. "Maybe they'll come back."

The other brushed it aside. "Stop dreamin'. Did the horse come back, or even gas autos? This is a age of progress. We go forward not behind. You got to move the same way, Sam. But what's the use? I told Rose, I warned her... Sam, you're just an anarchism."

Sam heard the garments drop to the far end of the work table to which the sewing machine was attached, then, a second later, the door slam. He gave a small sigh of relief. Then he finished the last few stitches, turned off the light, and looked up at the clock on the wall. Six. Time to go home. To his wife.

Once more a sigh heaved itself up from the depths of his soul.

To his wife, the female counterpart of what had just left....

SAM READY opened the door, and shuddered. The odor which assailed his nostrils was unmistakable. Corned beef-and-cabbage. Again. Now, as it had a thousand times past, the thought occurred to him. His wife was simply lazy. Corned beef-and-cabbage took very little imagination to pre-

pare, and very little watching. The televiso soap-operas were on the screen from early morning until evening. The choice was obvious between being a good housekeeper and a soap-opera fan. Five nights a week, corned beef-and-cabbage....

Her voice came to him; she had heard the soft opening of the door: "Go wash, Sam. Dinner's ready."

Later, he waited for her to bring the food to the table. His gorge rose at the thought of the heaping mound of meat and vegetable which would be placed before him, but managed, somehow, to swallow the small tide of nausea. When the dish was put before him he did not look at it.

"Where's Paul?" he asked.

"You think he's like you?" she replied.

He didn't turn a hair at the words. He knew from the long years of listening to her how her mind worked, and these words were but the opening to greater things to follow.

She glowered at him from under her thick dark brows. "Supper can wait, Paul says, when it comes to making money."

"What's it this time, Rose?"

"Some man wants to borrow money and is giving Paul a diamond ring, three carats, for security."

"Paul didn't ask for his right arm...?"

"Sam! That's not the way to talk. Remember, please, that you are married to his sister."

"How can I forget? I didn't think when I married you I would have to buy three wedding rings, one for you one for me, and one for your brother."

"You're so ungrateful! Everything you have you owe him."

"I know. Ten years he's been reminding me of it."

"...And when he met you what

were you, a pants presser!"

"And now...?"

"Now you do vests and jackets too."

"A presser-of distinction."

She did not hear the note of irony in his voice. She was a creature ruled by moods born of what had transpired on the televised soap-operas. This afternoon one of her favorite characters had had another tragedy befall her. It became a simple matter of transposition. She was the character in the soap-opera, Paul, the hero, and Sam, her husband, the villain....

"The least you can do is try to make a success, if not for you, then for me. Ten years Paul has been helping you and what does it mean? You still have to ask him for money."

He did not look at her. He took a forkful of the tasteless meat and chewed it to pulp. Quite suddenly it came to him that a moment of decision had been reached. The hide he had thought so impervious to the jibes and insults of this woman and her brother, had through the onslaught of the years become thin, so that each word she uttered, each sound she made, was like a fiery-tipped needle holding a single drop of vitriol being inserted into him. He could take no more. Once she had been pretty, plump, with sweet mouth and soft skin, but years had coarsened the skin and prettiness and the mouth only *looked* sweet. And the plumpness was now a gross lazy body.

He hated her.

"**R**OSE," he put the fork carefully on the edge of the plate, "I think I'll go in and watch the news."

"That's my life with you! I don't see you all day and when you come home at night all you want to do is watch the news."

"It's hard to see the world from behind a sewing machine," he said.

"You didn't eat your dinner, Sam! All day I slaved over a hot stove. Do you know how tired I am...?"

"Do you know how tired I am?" he shouted suddenly. "How sick and tired I am... Your brother came in today again with a suit I had made for a customer. "...The pants too long, Sam," he said. "...Can't you learn...?" Well, next month he won't have to worry about the pants being too long. There won't be any store to come to!"

Their hate was mutual. He saw it now in her wild-eyed stare. The sudden knowledge gave his heart a lift and brought a smile to his lips. Now he could say what he wanted and leave her and even though he would only go into the next room it would be the same as if it were another world.

"I can't pay the rent. I told Paul when he rented the store it was in a bad place, but he knows everything, so he paid no attention to what I was saying. Now he'll have to. Because I'm going to stop being a presser and go back to being a tailor."

She didn't smile, so the cruelty could be seen only in her eyes and in her voice: "*You*, a tailor! Don't make me laugh! You can't sew a seam straight! Sam: *you make the pants too long!*"

THERE WAS a pleasant breeze parting the dusty curtains in the living room. It felt cool against his fevered brow. He noticed his fingers were trembling against the knob and squeezed them tightly on the cold plastic. He lifted his eyes to the screen. There was a serious-faced man, seated at a desk. The man was reading from a single sheet of paper in his right hand:

"...There is room for a certain

number of handworkers. Among the crafts the Martians have need of and want to make permanent residents of, are tailors...."

He heard the outside door slam and switched the set to another station. Sam knew the sound of the door slam meant Paul Ryan had come home.

He waited tensely for what he knew was coming, for he had no doubt that Rose would tell Paul of their argument....

"What's this Rose was telling me?" Paul demanded.

"I don't know what she told you," Sam said as he got to his feet, "but I'm telling you this. Rose and I are through. And you and I are through. I'm walking out."

"Well," Paul said softly. "So you're through? I'll say you are. I'm fed up with carrying you around. From now on you're on your own. We'll see how far you can go."

"I know how far I can go," Sam said. "To Mars...."

Paul's eyes widened, then narrowed in laughter. "Mars! So you've been listening to those damn fool newscasts how they want people to settle there. Sam, the presser, is going to be one of the pioneers. Like those guys with the beards in the covered wagons. Go ahead. But what will you do when they come back and say, 'Sam, you made the pants too long?'"

"I don't know," Sam said softly. He was facing Paul now. "Maybe this...."

Paul rocked back from the blow Sam gave him. He staggered as his brother-in-law hit him again and fell to the sofa under a third punch.

"...Ten years I been wanting to do this, Paul," Sam said. "And now it's done. It was worth waiting for."

But he didn't hear what Paul said through bleeding lips, as he walked out of the room: "You ain't through.

Just you wait—I'll get even...."

MR. CAAVA was like all Martians extremely tall and thin. He spoke perfect English which he had learned through the transposition machine, although he spoke it with an Englishman's accent. His lean, melancholy face with its sad eyes was thrust a little forward in attention to what the thick-chested man with the bulldog face was saying.

"...I want him arrested and thrown in jail, Mr. Caava. He's a wife deserter and worse. And I want you to know it's cost me a barrel of dough to come here to Mars. But I'm the kind of man who can't see his sister wronged the way she's been."

He nodded slowly, as if in tune to the other's words. Then he held up his hand. "Mr. Ryan," he spoke in grave accents. "First, about the matter of desertion—your brother-in-law is now under the jurisdiction of the Martian law system, which does not recognise desertion. A wife does not hold the same position here as she does on Earth.

"But the matter of his being a presser. On his application it said, *tailor*. Lying is a capital offense on Mars. He could suffer serious consequences if what you say is true. I will look into the matter."

Mr. Caava waited until Paul Ryan left, after telling him to return the next day, and called the district headquarters of the police department and asked them to bring Sam Ready to him.

"Mr. Ready," Mr. Caava spoke in severe accents. "Your brother-in-law is here with the avowed purpose of pressing charges against you. I told him that the charge he had in mind was not valid here, but that he could prosecute on another charge, if true. Mr. Ryan said you are in truth a

presser and not a tailor. He said you never could get it straight to make the pants shorter. Is that true?"

"About the pants, yes. But I am a tailor, Mr. Caava."

"So. How can we go about proving it?"

Sam Ready looked at the man behind the shallow desk. He had wondered from the very beginning why they needed tailors on Mars. All Martian males dressed in a toga-like affair. But he had been told that the reason for their wish to have tailors was so that they could dress as the Earthmen did. He had made a number of suits for them. And had made them as he always did, with the pants too long.

"Well, sir," Sam said. "All I can do is show my wares and let you decide."

"Not me, Mr. Ready. The court. Very well. I will see to it that the case is brought before the bar. In the morning, Mr. Ready."

PAUL RYAN was on the stand. He looked around him with a look of complete assurance. Six months had gone by since Sam Ready had left for Mars. Paul had discovered one of his acquaintances had also gone on the same expedition. He and this man had corresponded and so Paul knew Sam was doing well. And through his friend had also learned a little of the strange Martian laws. He hadn't come to Mars to get Sam on a wife-desertion charge. He was well aware of the fact it wouldn't hold up in court. What he wanted was to get Sam on a lying charge. He would have full vengeance then.

"Mr. Ryan," the Judge said. "You have said that Mr. Ready is not a tailor. How is that?"

"By his own words, if he ain't afraid to tell the truth," Paul said.

Sam spoke from the table at which he was seated: "Anything he'll ask I'll answer."

"How long you been a tailor, Sam?" Paul asked.

"Ten years," Sam replied, "that you and I were together, and for ten years before."

"And what did the customers always say, Sam, all those years? I mean about the pants?"

"They were always too long."

"That's right. You see, Judge. He always made the pants too long. So finally he stopped trying to be a tailor and became a presser. My brother-in-law could only make one kind of suit but styles changed so he was stuck and had to stop making that kind of suit. Now, here on Mars, he's making the same kind of suit. But I'm told that the Martian people are so far ahead of us in science and things like that we got to live ten thousand more years to catch up. And what happens? This man comes and makes fools of everyone."

"Look! He brought his witnesses to court with him, wearing one of his suits. A regular *zoot*, that's what his witnesses are. Tight-fitting pants at the ankles, with the wide shoulders and narrow hips like in 1945. Always behind in the styles. He should go back to pressing."

The court looked at the way the four men Sam Ready had brought to court looked. Paul Ryan had described them perfectly. They all wondered why Sam Ready was smiling.

"I am waiting for my chief witness," he said. "Mr. Caava. Ah! There he is."

ALL EYES turned to the entrance. Mr. Caava was coming down the center aisle. He was wearing a lavender suit whose trousers ends fit snugly about his ankles. The trousers

descended from a full waist in a pegged design. The jacket was very padded at the shoulders and had narrow hips. A wide-brimmed hat sat rakishly on the side of Mr. Caava's head. The melancholy look was gone.

"See!" Paul shouted gleefully. "A *zoot* suit he's wearing. Sam! You made the pants too long!"

"No, Paul," Sam said gently. "You see, you forgot one thing. I had to fit these people right. A presser knows nothing of tailoring. But *I* am a *tailor*. An artist. These people are tall and thin. If I had made a suit for them which fits like what's in style on Earth they would look like scarecrows with three inches of their wrists showing and six of their ankles. These people admire the pictures of Earthmen, with their broad shoulders and small hips. The only suit they could wear is the kind I made.

"A *zoot* suit. So you see, the only kind of suit I can make is the only kind of suit they can wear. Paul, the pants is no more too long. . . ."

The Judge nodded soberly. "The prisoner is proved in the right. And the charges are falsely brought. Now I have here your deposition, Mr. Ryan. It says in the event he is proved

guilty you would like to take over his shop. Well, he is innocent. It is the opinion of this court that you, Mr. Ryan, did bring these charges with malicious intent. Therefore, since the laws of Mars are specific in these cases, I place you in the hands of this man, Mr. Ready, to do with as he wishes."

"You can't do that!" Paul bleated. "I'm a citizen of. . . ."

The Judge held up a hand for quiet. "Please, Mr. Ryan. You are on Mars now, where the laws of Earth do not hold. Mr. Ready, I give this man in your charge. Do as you wish with him."

"COME, PAUL," Sam Ready said.

"You're going to work for me. now. And every pair of pants you're going to make is going to have a label on them: 'These pants are too small.' And all day you're going to spend in making them longer. Until I say, 'Paul, you made the pants too long.' Then you go back to making them smaller, and so until ten years have gone by."

THE END

Recently a machine has been made which utilizes a layer of high-speed air—the actual cutting mechanism. The machine is a microtome, a device for sectioning materials to be examined under the microscope. Since the sections for microscopic examination must be extremely thin, this form of cutting is about the most refined there is. The air-microtome consists of a whirling blade of steel revolving at a tremendous rate, so rapidly that the layer of air next to its rotating edge is set into furious motion, to a speed above that of sound. The result is that the microtome uses this layer of air as the cutting mechanism rather than the steel blade itself. Materials as hard and diverse as asbestos

AIR CAN CUT

By MERRITT LINN

and tile are easily sectioned.

Another cutting method involves friction. Band-saws have been made whose steel blades travel so rapidly that they literally erode away the metal against which they are brought!

Cutting techniques are changing but undoubtedly the kitchen knife will remain a simple stainless-steel blade for a long time to come!

CANCER CURE?

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• **By CHARLES RECOUR**

TECHNOLOGICAL unemployment occurs even in the airy reaches of advanced medical and physical practice. At one time there were not enough radium or high-powered X-ray machines to go around, to treat the numerous sufferers from tumors and cancers of various forms. But out of the welter and confusion of the Atomic Age some amazingly good things have come. One of them is Cobalt 60.

This latest tool in the treatment of malignant cancerous growths is quite simply an artificially radioactive material with properties much like metallic radium, only better—and cheaper. Quantities of cobalt metal are immersed in a reacting atomic pile where they are themselves converted into furiously radioactive substances. Loaded under a shield of nine feet of water into the leaded head of a simple container inserted in a machine, the radioactives are used exactly like radium in the treatment of cancerous growths.

Hitherto a partial replacement for radium has been X-rays of the order of the two-million-volt type. The drawback to using such X-rays is great, of course, since they are so dangerous not only to the patient but to the operator as well. In addition, the cost of a two-million-volt X-ray machine is prohibitive. It requires a virtual movie set of electrical and mechanical equipment to make it function.

But radioactive Cobalt 60 is simple and cheap. For example, compare the price of equivalent amounts of radium and Cobalt 60. The former costs twenty-six million dollars, the latter about eighteen thousand dollars!

What is more important, perhaps, is the fact that these radioactives made synthetically can be controlled and handled much more easily than radium or X-rays. The natural products are ferociously virulent, dangerous and awkward to use, whereas the synthetics can literally be contained in needles and tiny administrators requiring only the most casual shielding.

The field of medical treatment with synthetic radioactives is just being scratched. The vistas open are endless and, as both physics and medicine investigate further, it is likely that, one after another, the more obnoxious and dangerous of radiation-susceptible diseases are likely to be destroyed. The future is not all atomic bomb!

BEETHOVEN'S HEAVENS

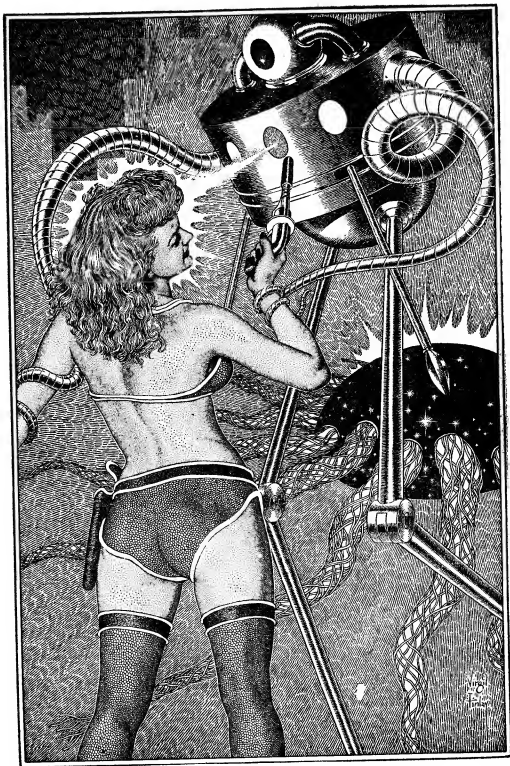
By JUNE LURIE

THE CHANCE event that casts patterns of stars into the peculiar relationships But in the end, as always, nothing came viewed from Earth, has given rise to the naming of the constellations. Actually, most stars in a given constellation—say, for example, Ursa Major (the Great Bear)—have no real connection with each other. It just happens that they are in a comparable position in stellar latitude and longitude (declination and ascension); in depth they are vastly different. Nevertheless, they form a picture seen from Earth and, since antiquity, men have given names to such stellar groups. Time has approved of most of these names, and they have endured to the present day.

Every now and then, however, some wag gets the idea of renaming them—and sometimes the intention is quite serious! Fortunately, common sense prevails and none of the recurrent renaming schemes has been given much credence. The most famous attempt at renaming the constellations was made by Herbert, a member of the British Parliament. His scheme received wide publicity and, for a brief moment during the last war, attained some measure of fame. of it, and Cassiopeia, Ursa Major, Ursa Minor, and the hosts of other constellations go serenely along their ways. His proposal, however, was not without some merit, and it is amusing to consider some of the names he chose.

First Herbert suggested that, rather than those of Greek gods and goddesses, the names of men should be used. Thus he would name many constellations after musicians: Mozart, Beethoven, Bach, etc. Another class used would be famous politicians, their names constituting the names of the individual stars, while the constellation would take the name of their country. We'd have a stellar system, for example, named Britain, with stars named George V, Churchill, etc.

He even proposed that Draco, the Dragon, become the constellation of tyrants, the stars to be named after Attila, Hitler, etc. Herbert prepared numerous star maps of his ideas but, since he was known for his comic tendencies, the suggestions were greeted with amusement. Others, however, less recently, have been very serious in suggesting, as did one bishop, that the stars be named after saints and great Christians! Fortunately there is no likelihood of these changes' ever being made, for names are hard to change. There's more in a name than one usually realizes, Shakespeare to the contrary! Let's keep the stars as they are—glittering pinpoints of light to which someday men may attain....



The robot act was a sensation

I'LL FOLLOW YOU TO HELL

By William P. McGivern

Ryan was a copper of the old school. He had determination — and more. He'd trail a man into hell itself. But he found that the trip is usually made on a one-way ticket

THEY BROUGHT him in about three in the morning, a slender, graying man with mild, bewildered eyes, and propped him against the counter of the Third Detective Division. One of the cops, a fresh-faced youngster named Wilson, called out, "Customer, gentlemen. Service please."

A brooding, waiting mood lay over the place—a night-mood that fitted in perfectly with the dirt, cynicism, and basic hopelessness of a police station.

Cops, as a breed, are not the most cheerful people in the world. Their business—the very nature of it—makes them pessimists. Night after night the lawless—the blank-eyed offenders—are brought in. And not one is ever guilty. They are all maltreated, imposed-upon citizens, and

they'll be the first to tell you so.

They tell the cops how badly they are abused and the cops listen with hard, stiff faces and then throw them into the tank until they can tell their stories to the judge and usually the judge finds that they themselves are the abusers—the abusers of the society which gives them aid and encouragement.

The good citizens do not see these offenders; the judge sees them but briefly. The police, however, are stuck with them in the interim; the police listen to their whinings and their lies. So the cynicism of the police can be understood.

There were three detectives, the night-shift, in the stale-smelling, dimly lit room. Two were sleeping, one on a wooden bench under the green-shaded windows, the other slumped

down in a chair, a gray felt hat pulled down over his eyes. The third, a powerfully built man with reddish-brown hair, was awake, hunched over a report on his desk. This was Ryan, known as the toughest cop in the toughest district in Philadelphia. Ryan never napped on duty; he was always grimly, hopefully awake. Now he stood slowly, moving with the lazy grace of a confident animal, and strolled across the cigarette-littered floor to the counter. He was a tall broad man, solid as a slab of granite, with hard flat features, and eyes that were gray and deep and merciless.

"What have you got?" he said, glancing with impersonal disgust at the slender graying man between the two cops.

"A drunk," the fresh-faced cop named Wilson said. He grinned. "But there was an odd angle about him, so we decided to turn it over to the high-priced help. Meaning you hawkshaws, of course. I—"

"Don't be cute about it," Ryan said, looking steadily at Wilson. "Just give me the facts."

The cop, Wilson, nodded and wet his lips. The impact of Ryan's deep pitiless eyes left him slightly breathless. "Sure, sure," he said. "We found him in the gutter at the intersection of Sixth and Market. He was laying about twenty feet from a jeweler's store that had the window knocked in. There was no robbery report from there, but the protection service boys were out on it, of course. Nothing missing from the jewelry shop, it turned out, but this character was on the scene, and so—" Wilson shrugged, glad to get his story over, unwilling to add any irrelevant details which might irritate Ryan.

"Okay, any identification?" Ryan said.

"Nothing."

"Money, social security card, clothing labels?"

"There was nothing. He don't even have a cigarette butt on him."

Ryan stared at the slender little man for a moment or so, noting his pale intelligent face, his mild, oddly, bewildered eyes, his silvery hair. Possibly a dopey, he thought. There was something about him slightly off-key.

"Bring him in over to my desk," he said, at last. "I'll have a talk with him."

"That's another thing," Wilson said. "He don't talk."

Ryan grinned, and something glittered deep in his merciless eyes. "He'll talk, all right."

"Want us to stick around in case he goes off his nut, or something like that?" Wilson said.

RYAN TOOK his time lighting a cigarette. He stared over the flame at Wilson. "Thanks," he said finally. "Thanks a lot. But I'd like it better if you'd do as you're told and get the hell back to your car. That okay with you?"

There was no more conversation. The cops did as they were told, dumped the graying little man beside Ryan's desk, and left. Outside, in the bleak dark street, the fresh-faced cop named Wilson swore savagely and looked up at the green-shaded windows of the detective division. "Who the hell does he think he is?" he said, his voice low and bitter.

Wilson's partner, an old-timer named Flannigan, shrugged briefly. "Don't try to warm up to Joe Ryan," he said. "He's got about the same kind of heart you'd find in a rattlesnake. Just keep your mouth shut around him, that's the best bet." Flannigan looked up at the green-shaded windows. "I feel a little sorry for that fellow we brought in," he said.

"Yeah, so do I," Wilson said slowly.

They both shrugged then and walked down to their squad car, which waited for them gleaming and black under chilling winter rain.

"Let's start with your name," Ryan said, facing the slender man with the silvery hair.

There was no answer. The little man stared back at him, bewildered, uneasy, confused.

"Now get this straight," Ryan said in a low hard voice. "We're going to find out all about you, name, address, family, what you're doing in town, everything. We'll get it, believe me. We can do it nice and fast, or we can do it tough and slow. You make the choice, buddy."

Again, there was no answer.

Ryan felt a savage anger building up in him, swiftly, dangerously. This was always the way it went, he thought. You offered them the break, the out, and they sneered at you, called you a fool in the silent depths of their minds. Ryan's philosophy was a bleak and lonely one: the world, his world, was crowded with thugs, hoodlums, whores, racketmen, chisellers, rapists, deadbeats of all varieties and sorts. That decent people might exist was an academic point to Ryan; he never met them. The sort who made up his world were dangerous, implacable enemies; they would get him if he didn't hit them first, and hit them hard. He knew no other way of doing his job.

"Okay, we'll try once more," he said slowly. "What's your name?"

There was no answer.

Ryan stood, tipping his chair over backward. Before it struck the floor he had jerked the little man to his feet and struck him savagely across the mouth. The chair crashed to the floor, and the sound of it obliterated

the shocked desperate shriek that forced itself through the little man's lips.

"Now we're in business," Ryan said, breathing heavily. "You can make noises. Now make some sense. What's your name?"

THERE WAS no answer. Swearing,

Ryan slapped him again, and dropped him back in his chair. The little man stared at Ryan as he might stare at some prehistoric monster come to life. There was no longer bewilderment in his eyes; his expression was one of numb, desperate disbelief. His lips moved. "Why?" he asked. "Why?" The single word was spoken haltingly.

"Oh, you want to ask questions now," Ryan said. "This is good. Well, I'll play along. I hit you because you're a little slow to talk, buddy. If you don't want another sample, keep talking, and talk fast. What's your name?"

"I—I can tell you nothing," the little man said. He seemed stunned. Almost as an afterthought, he added, "I have never been struck before."

"You're going to talk, get it?" Ryan said. He was breathing harder now, and he felt the reins he kept on his temper slipping through his hands. They pushed him to it, he thought, almost desperately. These deadbeats, bums, hoodlums—the responsibility was theirs, not his. "What's your name?" he shouted, jerking the little man to his feet....

Five minutes later Ryan called downstairs to the House Sergeant. "Send up a couple of men," he said. "This drunk I got here just passed out. Dump a bucket of water over him and lock him up for a few hours."

"Okay. You got his name?"

Ryan slammed the receiver down without answering. He paced the floor, drawing deeply on his cigarette.

Occasionally he glanced at the small huddled body of the little man lying on the floor. Stupid, stubborn, ignorant jerk, he thought. What was he trying to hide? Did he think he could get away with it by just keeping his mouth shut?

The turnkey and the House Sergeant's clerk came in and carted the little man out, carrying his frail slender form as easily as they would that of a child. When they were gone Ryan threw his cigarette away and rubbed his forehead tiredly. He sighed finally and went to the basin in the corner of the room and began to wash his hands. This was a ritual of his, unexplained and unexplainable, but it was one he never varied. After using his hands on a man, Ryan scrubbed them thoroughly, painstakingly, with strong soap and hot water. Sometimes a newcomer to the division kidded him about this peculiarity, but no one was likely to make that mistake twice. Ryan didn't know why he washed his hands after striking a man; but he didn't like to be kidded about it. He didn't even like to think about it.

Twenty minutes later, as Ryan was looking over a report on one of his cases, the phone rang. It was the House Sergeant. "Ryan, I just got a tip-off from the Hall that we're getting some visitors. It's big stuff. The Superintendent and the Mayor, and a few carloads of brass."

"What's up?" Ryan said.

"Damned if I know. But you'd better wake up those sleeping beauties of yours."

"Okay, thanks." Ryan replaced the phone, rubbed his forehead for a few seconds, and then shrugged.

He stood and snapped on the strong white overhead lights. He shook the detective sleeping in the chair, and walked over and kicked the bench the other man was lying on.

"The Superintendent's coming out," he said as they sat up, blinking and yawning. "Yeah, that's right, the Superintendent. And the Mayor's with him. Better splash some water on your faces."

THE DELEGATION from City Hall arrived within ten minutes. It was a formidable group: Mayor Jeremy Morrison was in the lead, plump, nervous, and harried, and following him was Dick Gibbons, Superintendent of Police, and three men whom Ryan didn't recognize. One of the strangers, a tall, quietly dressed man with heavy dark eyebrows and a lean sensitive face, was vaguely familiar to Ryan. He had seen the man somewhere before, of that much he was sure; but he couldn't connect a name of identity to those well-bred, distinguished features.

Morrison did the talking. "Ryan, we have a report that a thin gray-haired man was brought in here about half an hour ago. Is that correct?"

"Yeah, that's right," Ryan said. He sensed a sudden excitement in the group; the tall man with the sensitive face let out his breath slowly. What the hell was going on, Ryan wondered. Why this stir over a nameless little drunk?

"Where is he?" Morrison said.

"Downstairs in the cell block," Ryan said. "They just carried him down there."

"Carried?" The tall man spoke for the first time in a voice that was low but authoritative. "Was he injured?"

"No, he was okay." Ryan said. "He—well, he gave me some trouble and I had to handle him a bit."

Something changed in the tall man's face, and Ryan felt a touch of color come up into his cheeks. The tall man was staring at him as if he were

a particularly repellent form of vermin.

"You had to handle him a bit, eh?" the tall man repeated.

"He wouldn't talk," Ryan said. "I asked him who he was, that's all, and he wouldn't talk." He felt anger surging through him now. They were all looking at him as if he were some kind of monster. "How the hell am I supposed to do this job, anyway? The only way to handle these bums is to—"

The tall man made a sharp silencing gesture with his hand. "I'm not interested in your philosophy of police work," he said, in an icy voice. "It would fit perfectly with gas chambers and racks, I'm quite sure."

Ryan took an involuntary step forward. "Now just a minute," he said. "I—"

Gibbons, Superintendent of Police, said, "Shut up, and stay shut up, Ryan. That's an order"

"Let's go down to the cell block," the tall man said.

Ryan fought back the words that were pounding for release in his mind. The habit of obedience was strong in him, almost an instinctive reflex of his will. He was capable of swinging at the tall man, although he knew he was someone of importance, but the command of Gibbons, his chief, stopped him dead in his tracks.

THE GROUP filed out of the Detective Division, and went downstairs to the first floor of the station. Ryan followed them, his jaw set angrily. They went through to the roll-call room, and the House Sergeant lumbered out of his office and belabored for the turnkey. There was no answer. "Must be in the cell-block," the sergeant muttered. "I'll take you back."

He opened the door leading to the cell-block.

Ryan heard Gibbons curse.

He looked over his shoulder and saw the turnkey lying on the floor, and the door of a cell standing open. The cell was empty.

There was a furious but despairing bit of activity after that, in which it was ascertained that the slender gray-haired little man had apparently vanished into thin air. The turnkey was revived, and told a vague, bewildered story.

"We brought him in here and dumped him on the cot," he said, shaking his head slowly and staring anxiously at his circle of questioners. "I came back a while later and he was standing up, right at the door. He beckoned to me, and I walked over to him, thinking, you know, he wanted a drink or something. When I got up close to him—" The turnkey paused, frowning, and rubbed his gray head. "Well, I don't know just what happened. He reached out and touched me on the side of the face—I mean, he hit me on the face. He must have hit me; sure. That's all I remember."

"Well, for God's sake, did he just walk out then?" Gibbons demanded of no one in particular.

The House Sergeant rubbed his damp forehead. "He could have, I guess. I mean, once he got out of the cell he could walk into the roll room and go out the side door."

"He can't be far," Ryan said. "Let's move. We can pick him up in ten minutes."

The tall man studied him carefully, thoughtfully. "This started with you," he said, in his low voice. "You had the opportunity to—" He paused and shrugged, a gesture of weariness and despair. "However, you chose to exercise your sadistic needs on him, and drive him away from here."

Ryan said, "I tell you we can get

him in ten minutes. Just *who* the hell is he, anyway?"

The tall man glanced at the Mayor, ignoring Ryan. "I certainly hope this specimen isn't typical of the men on this city's police force."

Mayor Morrison, an expert politician, reacted almost instinctively to the prod in the tall man's voice. "You can believe me he isn't," he said, in the ringing tones he would use to a Women's Voter's League Against Crime. Glaring at Ryan, he said, "You're suspended until further notice. I want you to turn your badge and gun in immediately. There'll be a Police Court hearing on this matter, I can promise you."

"Okay," Ryan said. He was trembling slightly and there was a thin white line about his mouth. Nothing showed in his face. "Okay," he said again, and his voice was slightly thicker. He turned and strode away from the group, his heels striking the floor with measured, angry defiance.

TEN MINUTES later Ryan stalked away from the station house, his topcoat collar turned up against the chilling drizzle. Light from neon signs flashed and danced on the gleaming car tracks, and above him the bare black limbs of winter trees shook in the face of a high whistling wind. Ryan saw and heard nothing; his eyes, fixed straight ahead, were glassy with a moisture that was not related to the rain.

He was hardly aware of the hand that caught his elbow. Turning, slightly dazed, he saw Ed Fremont, a reporter from the city's morning paper.

"Well, what do you want?" Ryan snapped.

"Damn it, what's going on at the district?" Fremont said. "What's the Mayor and Superintendent doing out on a night like this?"

"I don't know a thing," Ryan said. Fremont raised his eyebrows. "Nothing, eh? You saw that tall guy with the Oxford-type face, I suppose. Didn't that make you a little curious?"

"I don't know a thing," Ryan repeated in the same tone. He caught Fremont's lapels in a big hand. "Who was that guy?" he snapped.

Fremont laughed. "Sure, you're curious," he said. "Ryan, you should look at a newspaper occasionally. Reading flyers exclusively isn't too broadening a hobby."

"Who was he?" Ryan growled.

"Well, that gentleman is the Under Secretary of these United States," Fremont said. "What did he want at a two-bit slum station? Come on, give me a break. Just a hint, Ryan."

Ryan pushed Fremont away from him slowly, and continued on down the street, eyes fixed straight ahead, cursing the tall man in a low, raging voice.

RYAN WOKE late the following afternoon. He had drunk a pint of whisky to put him to sleep, and now there was an iron band of pain pressing across his forehead, and his eyes blinked against the late sunlight filtering into his room. For a moment he lay still, thinking of what had happened, and then he climbed out of bed, hurrying as if to escape his memories. After shaving and dressing, he left his room and went down to the street: It was a cold, depressing day, with a weak sun trying futilely to force its way through massive ranks of dark clouds. Ryan turned into the restaurant where he usually ate, and ordered tomato juice, coffee and doughnuts. After swallowing the food hastily, he went into a phone booth and called his district.

"This is Ryan," he said, recogniz-

ing the House Sergeant's voice. "Did they pick up that little drunk yet?"

The sergeant's voice was cautious. "We ain't supposed to talk about it, Ryan. But they haven't got him, I can tell you that much."

"Just *who* in hell is he?"

"Damned if I know. I'm not sure anyone knows. The FBI is in on it now. Maybe he's a spy or a big smuggler, or something like that."

"He's just a soft-headed lush, if you ask me," Ryan said. He hung up the phone, paid his bill and went out into the darkening evening. Now we got the FBI in it, he thought, grinning crookedly. Lot of good that would do. Those college kids would run around with trucks full of fancy equipment, using two-bit words, and wind up lost in Brewery Town, or somewhere deep in the South Side. This was a job for cops who knew their way around the city, who knew the joints and the dives, the stoolies and hoods.

"I could find him," Ryan muttered into the wind. He stopped at an intersection for an instant, and his next thought was reflexive, inevitable. "I'll find him," he said, in a low bitter voice. "Yeah, I'll get you, you little clammed-up bum. You made a sucker out of me last night, and it's time to even the score."

Ryan walked swiftly toward his district. He stopped across the street from it, studying the three-story red-brick building with narrow, thoughtful eyes. Fifteen hours ago a nameless little man had sauntered casually out of that place, to disappear into the city. So far the FBI, the local cops, and a variety of imported brass hadn't been able to trace him. Ryan was facing the side door of the station, the exit the little man must have used in making his escape. Okay, he had come out that door, descended a

flight of stairs to the sidewalk—and then what? The little man had the choice of walking in two directions at that moment. He could go left or right. Ryan elected to check right first. That decision, if it was the one the little man had made, would have taken him into a nondescript block of delicatessen stores, business shops, and a few moderately well-kept rooming houses.

Ryan pulled his hat brim down, and squared his jaw. Okay, I'm coming after you, little man, he thought. He crossed the street and started down the block, moving slowly but purposefully, trying to imagine the chances that would have been available to the little man, and which of them he might have chosen.

FIRST OF all, Ryan reminded himself, it had been about three-thirty in the morning when the little man evaporated from the station. At that time these shops would have been closed up tight. The little man would have been hurrying along a dark empty street. Since it had been raining at the time, there was damn little chance than any insomniac resident of this neighborhood had been out for a restless stroll.

So what would the little man have done? Well, that was simple; he'd just have to keep going. Obviously he must get inside, off the streets, and that meant a place that was open in the early hours of the morning. Ryan stopped at the end of the block, and looked down the next one with a grim little smile on his lips. This looked more promising; here there were a few taprooms, an all-night restaurant, and a penny arcade and shooting gallery that was open around the clock.

"Was this what you ran for?" he said aloud, still smiling. "The bright

lights, the chance to roll a drunk, or of finding some lushed-up broad who'd take you home for the night?" He started down the block slowly, a big man with hard flat features, and something of the jungle in his soft measured strides and the depths of his pitiless eyes. I'm right behind you, little man, he thought, right on your heels.

Ryan remembered then that the little man had had no money. He frowned; that ruled out the bars and the all-night restaurants pretty definitely. You couldn't hang around such places for long without at least springing for a beer. The penny arcade was a better bet for a guy without funds.

Ryan sauntered into the brightly lighted arcade, and changed a quarter into pennies at the cashier's cage. Then he wandered around for a few minutes, stopping to test his grip at a strength machine, and waiting in line to peer through a cloudy lens at a pair of tiny figures doing an Apache dance. After studying the joint a while he drifted over to the open door of a small office. Inside a paunchy balding man in his early forties was looking gloomily at a set of figures.

"Got a minute, chief?" he said.

The little man looked up at him frowning. "What's on your mind?"

Ryan hesitated. He couldn't flash his badge and demand cooperation or else. "Matter of fact, I'm in a little trouble," he said, and the words, faintly entreating, were stiff and awkward on his lips.

"Well, what is it?" the balding little man said. "Lose your bankroll out there?" he asked, grinning.

Ryan smiled slightly. "Nothing like that. The thing is I'm looking for my brother. He's not nuts exactly, but he's a little slow in the head. He wandered away from the house early this morning, around two-thirty or

three, I think, and I've traced him this far. I'm wondering if you saw him. He's a little guy, with silvery hair and kind of a lost look about him. Were you here this morning?"

"Yeah, I was here till eight. But I didn't see no one looking like your brother."

"Thanks," Ryan said.

HE LEFT the arcade, not discouraged, only impatient. The break would come, of course; it always did. Somewhere there would be someone who had seen the little man. Ryan had only to keep plodding along, asking questions, and eventually, inevitably, he'd get on the track of the little man with the silvery hair.

Ryan spent the next few hours in barrooms, listening to the gossip, asking a few casual questions. He learned nothing of value. When he got a mile away from the district, he decided that he wasn't on the right trail. The little man had found a hole immediately, otherwise he would have been picked up by the squad cars that had covered the area earlier in the morning. Frowning, Ryan retraced his route until he came back to the district. Now he'd have to start over. Well, that was okay, he thought. A slow illogical anger against the little man was building up inside him. Why hadn't the little bastard been sensible and talked? He'd given him the chance, hadn't he? Okay, you won't get another one, Ryan thought. The next time I'll play for keeps, he told himself, pounding a big fist into the palm of his hand.

Ryan stood on the street corner, still frowning, imagining the problem the little man had faced when he left the police station. It had been raining and cold, the street had been deserted, all the shops were shut up for the night, and the little man hadn't had

a dime in his pockets. Where in hell could he have gone?

Suddenly Ryan had an idea. Undoubtedly the street had been deserted—no one would have been out in that rain at three in the morning unless it was absolutely necessary. This thought brought a grim smile to his lips. Supposing the little man had met someone who had found it necessary to be out at that time of the night. There were such people, of course: cab drivers, waitresses, printers, newspapermen, to list only a few. Ryan moved down the block again, studying the half-dozen or so rooming houses with sharp, alert eyes. Perhaps someone who lived in this block had been coming home from a night job and bumped into the little man...

Ryan turned and walked quickly back to the drug store. He entered a phone booth and called a special number of the cab company. When a voice answered, Ryan said, "Police. I want to know if one of your drivers dropped a fare on Huntington Street around three or three-thirty this morning. Yeah, that's right. Between Third and Fourth on Huntington. I want this right away."

"Okay. What district are you in?"

Ryan rubbed his jaw. "I'm on a private wire." He gave the man his number. "I'll wait for your call," he said.

"Okay."

Ryan went out to the counter and ordered a cup of coffee. He stared at the reflection of his square hard face in the mirror. There's nothing to be mad about, he thought, frowning slightly. Things are working out. You'll get the guy.

He was on his third cup of coffee when the phone in the booth rang. Ryan hurried over and lifted the receiver.

"This is Yellow Cab," a voice said.

"Yeah, I'm the guy you want,"

Ryan said. "What did you find out?"

"One of our boys dropped a fare at 6534 Huntington this morning at about three-thirty. The cabby knows the fare, by the way. She's a singer, works at the Kit-Kat Club. She's a regular customer of this cabby, he says."

"What's her name?"

"Linda Nelson."

"Thanks," Ryan said softly.

HE LEFT the drug store and walked down the block to a three-storied rooming house which was numbered 6534. This was it, he thought, smiling slowly. He went up lived. She had come home last night at approximately the same time the little man had been walking down this street. Perhaps they had met, Ryan thought, smiling slowly. He went up the steps and opened the door of the vestibule: Linda Nelson's name was on a narrow white card held in a brass bracket. Ryan touched the bell under her name with his forefinger, and then paused. It was about nine o'clock now. She was undoubtedly at the club, the Kit-Kat. Perhaps it would be smarter to see her there. He left the house and walked down the street toward the intersection, moving now with long, eager strides.

From across the street a man stepped out behind the shadow of a tree, and looked speculatively at Ryan's retreating figure. This man was tall, heavily built, and his face was a pale triangular blur in the darkness. He lit a cigarette, and the match flame revealed a broken nose, and flat gray eyes under the ridged forehead of a professional boxer.

The man crossed the street and ascended the steps of the rooming house where Linda Nelson lived. He studied the name-plates inside the vestibule, scowling thoughtfully, and

then left the building and went down to the sidewalk. Smiling slightly, he turned and started after Ryan, hands deep in his pockets, and a pleased little gleam shining deep in his flat gray eyes.

RYAN REACHED the Kit-Kat club at a quarter after nine. It was an intimate little spot done in black and white leather, with a circular bar enclosing a minute bandstand. Linda Nelson went on at ten, Ryan learned from the bartender. Ryan sipped a beer and waited. He had a curious feeling that he was close to a lead.

Ten minutes later a tall, dapperly dressed man of middle years entered the club and took a stool at the far end of the bar. Ryan recognized him as one Soapy Felbin, a horse player by profession and choice, but a police informer by necessity. Soapy was at large by sufferance of the cops—only his cooperation with them kept him out of jail.

Ryan shifted his position so that Soapy couldn't see his face. He kept a check on Soapy every two or three minutes, and, when Soapy stood and disappeared into the men's room, Ryan followed him.

Soapy was leaning close to the mirror above the hand basin, inspecting a blemish on his chin, when Ryan tapped him firmly on the shoulder. Soapy knew what that meant. Every bad break in his life had occurred immediately after that firm, patient tap on the shoulder. He turned quickly, a furtive, eager-to-please smile lighting up his pale narrow face.

"Ryan, my boy," he said, laughing and wetting his lips. "How's the keed, hey?"

"What're you doing 'here'?" Ryan said.

"Why, nothing at all, nothing at

all," Soapy said. He put an astonished expression on his face. "Nothing wrong with dropping in here for a beer, is there?"

"Maybe not," Ryan said. He frowned, studying Soapy closely. He didn't like this coincidence. "Tell me something, Soapy," he said.

"Sure, anything," Soapy said.

"You hear anything about a guy who broke out of the Third District last night? A little guy with silvery hair, and a kind of a dumb look about him. What's the talk about that, Soapy?"

Soapy's eyes slid away from Ryan's. He shrugged elaborately. "I ain't heard no talk, Ryan. Broke out of a jail, eh? He can't be so dumb, hey, keed?" Soapy laughed pointlessly, trying to coax a smile into Ryan's square face. "That's a trick I never learned."

Ryan fought down his anger. They never got smart, he thought despairingly. They lied to you, cheated on you, and then wailed to heaven when you knocked the truth from them. With a big hand he gathered up the slack in Soapy's coat-front. "Now listen," he said, jerking the man's face within an inch of his own. "I want answers, not jokes. What about this little guy? What's the talk?"

SOAPY'S EYES shifted desperately about the men's room, touching and sliding off everything within sight. "You're off base, Ryan," he muttered. "You're under suspension. You got no gun or badge now."

"You know something after all," Ryan said. "Okay, good. I'm on suspension. That means I won't knock you around." Ryan raised a big hand and slapped Soapy across the mouth. "See? I can't touch you. I'm under suspension. I got no badge or gun, so I got to do this the gentle way." He slapped Soapy again, and the impact of the blow was like a pistol shot in

the small room. "Now, we'll try it the friendly way. What's the talk?"

"It's just talk," Soapy said in a dull, lifeless voice. He wasn't protesting any more. He was working now, doing his job, informing. He seemed almost relieved to be back at his trade. "He's big, I guess. Nobody knows much. But Donello's after him. After him bad."

"Keep going," Ryan said. Donello ran the West Side of Philadelphia. He was big in the city, in gambling, in insurance, in politics. When Donello wanted something he got it. Or somebody was in for a brick-house full of trouble.

"Donello has sent his boys out to pick him up," Soapy said. "I don't know why. The talk is that this little fellow is wanted by Washington. Maybe he's a big smuggler, or a spy, or something. Anyway, if Donello knows, he ain't saying. He's just turning the city upside down to find the guy."

"Where's the little guy? Anybody got any guesses?"

Soapy shrugged. "Nobody knows anything. Honest, Ryan, that's all I can tell you. How about letting me clear out of here?"

"Okay, beat it. Go do your drinking somewhere else."

RYAN WAS sipping another beer when a slim girl with shining blonde hair and a pretty but knowing pair of blue eyes entered the club and signalled to the bartender.

"I'm late, Joe," she said. "I wonder if you could do me a favor."

"If I can, Linda."

The girl was standing beside Ryan, her graceful hands resting lightly on the edge of the bar. She was wearing a delicate perfume, and he saw, in a glance that was studiously disinterested, that her skin was very fair, and that she was probably in her late twenties. She was no dewey-eyed debu-

tante, he guessed. There was a sharpness and hardness about that probably came from a knowledge that life was only sweet and rosy in movies, and the women's magazines.

"A friend dropped in on me, Linda said to Joe, as Ryan listened. "A girl I used to work with in Dallas. She's a little down on her luck now. Here's what I wish you'd do. Order some coffee and sandwiches and have them sent up there. Tell the boy just to leave them outside the door of my place. She may be asleep, and the poor kid needs that as much as she does food."

"I'll take care of it, Linda," Joe said.

"Thanks a million. I've got to change now and get back to work, or the boss will have a hemorrhage."

She turned, flicked Ryan with an incurious glance, and hurried back toward her dressing room. Ryan finished his beer, paid for it, and walked outside. He was grinning. Now he knew he was on the right track. "So it's a girl she used to work with in Dallas, eh?" he said to himself, still smiling.

"We'll see about that, he thought.

LINDA NELSON entered the vestibule of her apartment house at three-thirty in the morning. The light was out, she noticed as she fumbled about in her bag for the key. She was tired and irritable. It had been a long dull night, with one table of drunks asking for *Stardust* again and again, until every word and note in the piece was a torture to hear and to sing. She found her key and began to fumble for the lock.

Suddenly, without seeing or hearing anything suspicious, she knew that she wasn't alone in the dark vestibule. There was a blackness on the right of her that was deeper than the other shadows in the hall. She caught her

breath, forcing herself not to cry out; a paralyzing shudder went through her, and her heart began to hammer painfully at her ribs. There was nothing to do, no place to run to, or hide. But she had to get away...

A hand came down powerfully across her mouth.

"Okay, just relax," a low, harsh voice said. "You're not going to be hurt."

Ryan put up his free hand and screwed the light bulb back into the socket. Illumination flooded the hallway. He released the girl, and put both hands down at his side. "That's right, be smart," he said.

She was too terrified to scream. "What do you want?" she said.

"I want to talk to you," Ryan said. "You met a guy in the street about this time yesterday, didn't you? A little character with silvery hair. He's the baby I'm looking for."

"I've seen you before. You..."

"That's right. At the Kit-Kat. But let's stay with the little guy. He's upstairs, ain't he? He's the one you ordered the food for."

"Are you a cop?"

"I was, until your little friend got me into trouble. I'm suspended. But I won't stay that way. I'm going to teach him what trouble is. Real trouble. He's upstairs right now."

"I—I don't know what you're talking about."

"Don't get cute with me, baby. We're going upstairs to take a look. You're going to let me into your place, and if you say or do anything to tip him off you'll wish to hell you hadn't."

"I'm not taking you anywhere," she said, and her voice was suddenly tense and furious.

"Roll your hoop the hell out of here. You're no copper now. I wouldn't help you if you were after a **guy** who'd

murdered my mother."

"I didn't ask for help," Ryan said softly. "I just told you what I want." He caught her wrist and twisted it sharply behind her back. She tried to scream but his big hand closed over her mouth smothering it, and he held her that way, the back of her head pressed against his chest, and her arm twisted cruelly, until she stopped struggling and began to moan softly.

"I don't like doing this," Ryan said, breathing hard. He was ready to blow wide apart from the tangled pressures inside him. He didn't want to hurt her. He had liked her looks, liked the toughness and spunkiness about her, but she was standing between him and that nameless little man who had started all the trouble,

SHE RAISED herself to the tips of her sandals, straining against the pain in her shoulder.

Ryan removed his hand from her mouth. "He's upstairs, isn't he?"

"Y-yes."

"Okay, let's go up!"

"You're the one who beat him up yesterday, aren't you?" she said softly. "You're a big hero, a real tough guy." She was crying now, bitterly and silently. The tears fell on Ryan's hand, which was close to her face, ready to clamp across her mouth if she tried to scream. He jerked his hand away as if the tears were drops of molten lead, and rubbed it savagely against the fabric of his overcoat. It reminded him of something evil and repulsive, of his ritual of washing his hands after he'd struck a man...

"Stop it, damn you," he said, releasing her arm. "I—I didn't mean it. But I've got to get this guy."

"All right, you can get him," she said, in a weary lifeless voice. "That's the trouble with this whole dirty mess. Guys like you are always right, and

guys like him never have a chance. I'll take you up, big man. I hope they give you back your gun and badge, and have a mile-long parade in your honor."

"I'm doing my job," Ryan said desperately. "Now let's go...."

She opened the door of a third-floor apartment and snapped on a light. The small, neatly furnished room was empty. "It's me, Mr. Smith—Linda," she called out, and an instant later a door opened and a little man appeared, blinking slightly in the light, and looking as bewildered and lost as he had the night before. He smiled at Linda, tentatively, and then he looked at Ryan and began to nod his head slowly.

"I thought you would find me," he said, spacing the words out slowly and carefully. "I hoped so, at least."

The scene wasn't as Ryan had imagined it would be, and he felt the stirrings of an immense and defeating confusion. "I'm taking you in," he said. "Your little game is over, friend. This time we'll find out all about you, don't worry."

The girl sat down slowly, lifelessly, on the edge of the sofa and put her hands over her face. "He made me bring him here," she said in a muffled voice. Ryan saw her thin shoulders begin to shake, and that sight hurt him in a place he had never suspected existed.

"Yes, I know he did, Linda," the little man said, looking down on her with compassion. "Please don't worry about it."

"You ready to go?" Ryan snapped. He had to break this mood of indecision, of paralyzing, unexplainable weakness.

"Of course."

"Okay, come on."

The little man smiled. "But I'm not going with you. I'm going home."

"Very funny," Ryan said. "You got a great sense of humor. Now, do you come on your two feet, or do I clout you one and carry you in like a sack of potatoes."

"I am going home," the little man said.

RYAN MOVED toward him slowly, his big hands swinging heavily at his sides, and then, as he was ready to leap, he heard a sound behind him, the sound of a closing door, and he turned quickly, frowning, and stared at a big man with a broken nose and deep-set glittering eyes. The man held a gun in his right hand and his broad back was blocking the closed door.

"Hiya, Ryan?" the big man said.

Ryan knew the man. His name was Myers and he worked for Donello in West Philly. "Don't make a mistake, Myers," Ryan said. "This is police business. Clear your tail out of here."

"I been following you," Myers said. "Donello thought you might lead us to this character. Donello's smart, ain't he?" Myers glanced at the little man with the silvery hair. "Come on, chum. Step over this way. The boss wants a talk with you."

The little man didn't move. He regarded Myers with puzzled eyes. A muscle worked along Myers' jaw. "Do as I'm telling you," he said softly.

"What do you want him for?" Ryan said.

"I don't want him, Donello does," Myers said in the same soft voice. "Lots of big people are after him, the talk says. Donello wants to know the score, that's all. Maybe he can strike a trade with the big people, he figures. Maybe. I just take orders. And you'll be smart if you do too."

The little man sighed. His eyes were brighter now, sharper. He waved his hand casually, and the gun dropped from Myers' hand and struck

the carpet with a metallic thud.

Myers stared at his empty hand with narrowed eyes, and then, cursing, he leaped toward the little man. The little man brought his hand up once more, but quickly this time, and Myers stopped in mid-air, as finally and suddenly as if he had crashed head-long into a brick wall. With a grunt of mingled surprise and pain he slid to the floor and lay still.

"What'd you do to him?" Ryan cried.

"He's not harmed. He'll be perfectly all right in a few moments." The little man glanced at Linda. "Now I must be going."

"Please don't, *please!*" Linda said.

"It's no use here, I'm afraid."

Ryan wet his lips. "You're coming with me," he said, but his voice lacked conviction. He frowned at the little man, knowing that he faced something he didn't understand, something outside his experience, beyond his control.

The little man smiled as if he were reading Ryan's troubled thoughts. "You know you are powerless," he said. "I am going home."

"Where's your home?" Ryan said.

"It's a place you've never heard of, I'm afraid," the little man said. "Not by the name we call it, at least. We who live there know it as Esiderion."

"Esiderion?" Ryan stumbled over the unfamiliar word.

"You know it as the planet Mars," the little man said.

"Mars? This is great. This is better than the Berle show." Ryan laughed at the little man, derisively, mockingly, but the sound was oddly shallow in the small room. The little man regarded him thoughtfully, and under the curious impact of his expression Ryan's laugh faded and died. He was suddenly furious with himself, with everything. "You're lying," he yelled.

"DON'T TELL him anything, please," Linda said. "He wouldn't understand. All he knows is kicking and beating people who are helpless and miserable and can't fight back."

"Why should I lie to you?" the little man asked Ryan, who was staring resentfully at the girl.

"I don't know," Ryan muttered, without taking his eyes from the girl. "You know a hell of a lot that isn't true," he said to her, in a puzzled, angry voice. "I don't—"

"Oh, shut up, please shut up," she said wearily. "I don't want to listen to you."

"Okay, okay," Ryan shouted. "What proof have you got that you're from Mars?" he said to the little man. The idea, articulated, suddenly seemed wildly preposterous. "I know you're not, but what kind of a story have you got cooked up, that's what I want to know."

"You want a miracle, eh?" the little man said. "That's your trouble, I think. Unless the truth is buttressed by something mystical, something incomprehensible, you prefer to believe the truth is a lie. It's literally too good to be true."

"Don't talk to him," Linda said.

"What's wrong with him talking to me?" Ryan said.

"You wouldn't understand," Linda said. "You're too dumb, too brutal."

"What are you doing here?" Ryan said to the little man in a sullen voice. He *would* talk, by God, he swore.

"I came here with the hope that I might be of some use to you," the little man said. "Your government was most eager to make contact with those of us on Esiderion. Communications were long and difficult. But finally we agreed to send one of us here to help you solve your problems. You

do have problems, of course. Your world is going to blow itself up, of course, unless you change your ways." The little man sighed. "I was chosen to come here. However, something went wrong, there was some tiny miscalculation, and I missed the spot at which I was to meet the representatives of your country. Instead, I arrived where I was found by you and your men."

"How are you going to help us?" Ryan said. "You got weapons, bombs, things like that?"

"No, I have nothing like that for you," the little man said. "But we have learned to live together in peace. We could show you how to do the same."

"This is just a lot of double-talk," Ryan said.

Linda stood up and Ryan winced at the anger in her face. "That's what I knew you'd say, you big babboon," she said. "Doubletalk'. Anything you don't understand is doubletalk. You're too dumb to be helped." Tears started at the corners of her eyes. "Here's a guy who could have helped us," she said, in a weary, drained voice. "But he's not going to. He's leaving us cold. And all because he had to meet a sadistic bum like you. He thinks we're hopeless. He thinks we're all like you."

Ryan stared at the little man. "You're clearing out because I knocked you around a little?"

The little man shrugged. "That's part of it, I suppose. But the important thing is that I don't think you can be saved. And I'm not sure you're worth it anyway."

"BUT I WAS just doing my job," Ryan said angrily.

"You like doing it in the cruellest fashion possible, don't you?" the little

man said gently. "You're a savage who enjoys and thrills to savagery." He began to shake his head. "No, I see nothing there to save. I'll return to Esiderion and report the experiment a failure. We will break off communications with your people and take steps to make sure that it can never again be established. It's a pity, but—"

"Look, you've got it wrong," Ryan said stubbornly. "You're making a bum out of me in this deal because I knocked you around a little."

"Do you want him to give you a medal?" Linda said.

"Shut up," Ryan snapped, fighting down his anger.

"Go ahead, get mad," Linda said. "Knock me around. Twist my arm like you did downstairs."

"You hurt her too, of course," the little man said.

"She don't understand, you don't understand," Ryan yelled. He had to make them see what he felt, but he couldn't find the words. He stared at them, hating them, baffled and furious.

"It's hopeless," the little man said. "I must go now."

Linda suddenly screamed. Ryan wheeled about and saw the broken-nosed man was sitting up, a gun in his big fist. Myers snarled something and pulled the trigger, but by then Ryan had moved, desperately, instinctively, but aware of a savage delight in the prospect of destruction and violence. He hurled himself to one side, in front of Linda because Myers was firing at her, and his big body spun sideways as a slug smashed into his chest. He struck the floor and rolled toward Myers, fighting the pain under his heart, and the immense weakness flowing through his arms and legs. Nothing sustained him but his rage. The dull red anger was like

a powerful stimulant that forced him forward against the tides of pain and blackness that threatened to smother him. Ryan threw himself on Myers as another shot sounded. Powder scalded his cheek but he felt no pain, only the brightness before his eyes. The gun in Myers' hand twisted, bent backward under Ryan's weight, and the third shot, squeezed off with the last of Myers' strength, was the only one which did not strike Ryan. That last shot went downward, into Myers' heart....

Ryan heard them talking.

"He's dying, isn't he?" It was the girl's voice.

"Yes, he is," the little man said.

The girl began to cry.

Ryan forced his eyes open, saw the ceiling above him, immensely high, shimmering crazily. He was on his back, his head in the girl's lap. Her tears fell on his cheek.

"Cut it out," he said.

"You saved her," the little man said. He was kneeling beside Ryan, staring at him with puzzled eyes. "Why did you do that?"

"You're smart, figure it out," Ryan said.

"Please. Why did you do it?"

"Don't bother me," Ryan said.

"Tell him, please tell him," the girl said.

It was so damn simple, Ryan thought. What were they excited about? "I had to," he said, in a slow, patient voice. "He was going to shoot her, so I had to stop him. That's my job."

THEY BOTH leaned closer to him as he spoke, and he knew that was a bad sign. He was barely whispering now; soon he'd begin to choke. Ryan had observed this fatal sequence so often that he had some difficulty realizing that this time he wasn't a

spectator.

"I don't understand," the little man said. "I don't understand."

Ryan tried to laugh. It struck him as funny. "Jeez, you're real smart," he said.

"Why did you strike me? I felt you didn't want to."

"I had to."

"But why?"

They wouldn't leave him alone. "I got to take care of the good people," Ryan said. He knew it was about all over, but suddenly he wanted to talk. He experienced a vast sense of release now, and he knew he could make them understand. They were wrong about him, and he would set them straight. "I never wanted to hit anybody," he said. "But I had to. I had to take care of the good people. I didn't know any of them, but it was my job to take care of them, you see." This wasn't it, he realized sadly. He didn't know the words that would explain everything simply, inevitably.

"I'm a bad guy," he said, trying another tack. "But it was because I was fighting something bad." That was closer to it, but still not exactly right. Suddenly he was tired of talking. "What the hell," he said. "It don't make no difference."

"Is he dying?" the girl said again, in a tight, anxious voice.

"Yes. I was wrong about him, I think. When he struck me I hated him, and that destroyed my judgment. I'd never known hatred, you see, and it's the one disease that kills all that's worth while in us. He was a moralist of sorts. But without judgment. He chose the right thing to protect, but he protected it with primitive techniques."

"He saved me," Linda said. "He took those bullets that were meant for me."

"That's true," the little man. "He had to, you see. You were good, and it was his job to protect you."

"You could save him, couldn't you? You're smart, you know a lot of things."

"Is he worth saving?" the little man said.

"Go to hell," Ryan said. He wasn't taking favors from anyone; but they didn't hear him.

"Yes, yes, he is," Linda said in a low, pleading voice. "I know he's

worth saving. And you've got to stay here now. Find those government bigshots and tell them how to make things better here, like you were telling me yesterday."

"Yes, I think I'll stay," the little man said.

"And you'll save him?"

"Yes, I'll save him," the little man from Esiderion said. He glanced at Linda, smiling now. "Don't worry. I think I'll save you all."

THE END

NO LIMIT TO THE FUTURE

By WILLIAM KARNEY

NO ONE can travel forward in time except through the analytical processes of the mind, so any extrapolations of what the future will be like must necessarily be limited—limited, that is, to a logical series of deductions. Roughly in the middle of the century as we are, however, we have a perfect vantage point from which to launch a tentative picture of what things will be like fifty years from now. The reason is, we have the evidence of the past fifty years to guide us.

Recently, a popular semiscientific magazine reviewed the technological developments of the last fifty years, compared them with the present, and postulated the probable future. The result was fascinating, for it demonstrated clearly that some incredible accomplishments have been made, that a way of life was changed, and that the two inventions which in particular contributed to that change were not yet, at the time of the early 1900's, seen in their revolutionary light.

The inventions were the electric motor and the internal combustion engine. With the combination of the two, Man was released from the bonds of muscle-power. That fact more than anything accounted for the miracle of our present society.

Using these past fifty years as a yardstick, can we extrapolate sensibly into the future? The answer is "yes", provided we consider two fundamental facts. First, progress rises at an exponential rate, in geometric progression; that is, as time goes double, progress quadruples, and so on. Secondly, just as the internal combustion engine and the electric motor freed men's

muscles, so the new world of the vacuum tube and the transistor will free men's minds. That means that the ideas of cybernetics, the world of automatic computing machinery, will provide Man with the so-often-predicted robot.

The world of the year 2000 will be in many respects like the present world, just as our world is like that of the early 1900's. Certain fundamental human factors are the same even if views and attitudes are different. And progress will not be universal and unchangeable. Thus, we still have horses and some handworked machinery. There is no reason to believe we won't have some primitive conditions with us in time to come.

But on the whole we can assume that most of the dreams of the science-fictionists will have come true. Certainly interplanetary flight will be here. Certainly transportation will be utterly revolutionized by the helicopter, as will everyday living by the spreading of cities into vast semi-suburban districts. The progress in medicine and surgery will be equally tremendous, and life-expectancy proportionately extended.

Nor will Man destroy himself or civilization. As one prominent writer has pointed out, most prophets fail to consider that, along with our enormous powers of destruction, go fabulous reconstructive capabilities! Witness the tremendous destruction in Europe and the rapidity with which it is being repaired!

The next fifty years of technological and social progress will make the last fifty look like peanuts. The future has no limits!



The monster roared and charged his tormentors

THE MAN WHO COULD NOT DIE

By E. K. Jarvis

Death comes for all of us, but wise men have said: "He who cannot die must be one who has no fear of death—one who laughs at death—one who cares not whether he lives or dies."

"H O!" SHOUTED the green giant. He lunged forward, the long bright blade shooting out at the breast of the enemy.

But the other wasn't there when the sword point arrived. Swift as light from the tower of Meso, he moved. A great laugh of joy rose from the depths of the huge chest as he parried the thrust of the sword with the one in his own left hand. As a snake strikes, so did his own thrusting blade seek the other's chest and enter to its entire length and more than a foot beyond.

But Gomo did not fall. His fingers loosed the swords they held and seized the blade thrust through him. While the others watched with incredulity, Gomo snapped the blade off an inch from where it entered his belly. Then he fell on his face and fountains of green blood spurted from the hole in

his body. He writhed in agony.

Sido continued his wild laughter as he looked down on the corpse of the man he had once called friend. And then the laughter slowly subsided as the great head shook in wonder at the dead man's strength. Sido kicked the body gently so that it rolled once or twice, then settled back to the pose death had given it. Still shaking his head, Sido turned, looked at the men sitting at the small table on the outside of the Cafe Mars, and shouted:

"Ho, Earthmen! How did you like that?"

For a long instant there was no answer. Then the corporal in charge of the squad said: "Sido is still a fool!" It was a flat statement of fact.

The Martian's face stilled. Only the great red eyes seemed alive, and the hate which blazed out at the Earthmen was almost physical, so intense was it. Then the giant grunted an

inaudible something and moved past the men at the table, with a swagger which made most of them clench their fists in impotent anger.

"Gad!" said Kildeer, the youngest and rawest recruit on the squad. "What makes these goons tick? Is that all they live for, fight and die?"

"**D**AMN 'EM!" Captain Haynes growled. "It's always on their minds, revolt. And revenge...." He sighed and leaned back in his chair. His deep-set eyes seemed even more sunken than usual. Sweat dripped in a steady stream down the sides of his face and stained his tunic and trousers. Captain Haynes looked very uncomfortable and unhappy. He looked up at the soldier before him, regarded the man with brooding, searching glance for an instant, then said tiredly, "Oh, relax, Lafarge! What the hell! We're not in the States. To hell with regulations.

"Y'know, Lafarge. I worry about you. Doesn't make sense, does it? Because I know you worry about me, and with more reason. But maybe it's because I don't understand you and you do me. I don't know what you think of me, but I feel sure you don't think me a fool."

"Not a fool, sir," Lafarge said.

"No! Not a fool. Just incompetent.... And rightly so. But tell me, Lafarge. Why do you stay here and remain subordinate to men like myself? Certainly if I were C. O. C. you would have been a Major long ago. You run this post, as you have done since you came two years and some months ago. Without you, well, I don't know what would be...."

"The Captain exaggerates."

"The Captain speaks the truth. Six months I've been here, and it seems like six years. Heat, filth, beasts and Martians, and that damned pipeline

from the depths of hell. Y'know, Lafarge, I curse the man who first split the atom...." Haynes suddenly leaned forward and placed his arms on the desk and peered up through slitted eyes at Lafarge. "Fort Allen. Fifty men and three officers... all that are between a hundred thousand Martians and damnation, or worse. Why? Because back on Earth someone found that what was thought to be canals or belts of vegetation were in reality gigantic pipelines. So they sent exploration parties to investigate. And what do they find. The solution to all their difficulties. No more atom splitting. No more worrying about chain reactions and mutations, climatic changes, water evaporation, and I don't know what else as a result of the atomic discharges. Within these pipes a constant stream of pure energy was flowing, the contribution of a long-dead Martian civilization. Lafarge...."

"Sir....?"

"The bottle there. I'm thirsty."

Haynes drank noisily of the liquid. "Precious stuff, isn't it? The natives here kill for it, don't they?"

"The natives here kill for no apparent reason, sir," Lafarge said.

"But in us they would find a reason," Haynes said. "What keeps them from rushing the fort? I've seen them fight each other. They have no fear; they have no concept of it. And they know that in all this vast section of this damned planet we are alone."

"I think they're waiting for something," Lafarge heaved a mental sigh of relief. Now that Haynes was through with his talking perhaps he would have a chance to get off his mind what was on it. "They're suddenly more insolent, more sure of themselves. Something's in the wind. I'd like to take a patrol out...."

"To where?" Haynes asked.

"To the edge of the desert, where the great dunes lie. I have a feeling that the mystery lies in those hills somewhere. All I'll need will be ten men and two trucks."

"Pick them. And take enough ammo and supplies to last a week, Lafarge."

Corporal Vincent Lafarge came to attention, saluted and did an about-face and marched from the office. Elation flushed his rather pale cheeks. Now he could get to the bottom of it. Just the business of picking his squad. And that wouldn't be too hard.

THEY WERE haggard, drawn, utterly spent in spirit, as they struggled out from under the loads of the sand-weighted blankets. The wind was still strong, but now it was only blowing in gusts. The fury of the storm had been spent. Tired as he was, and knowing his men to be in the same condition, Lafarge ordered them to work.

When they had done he called them together and put the problem before them. They could go back to Fort Allen or continue to their goal, the spot in the desert where the pipelines from the depths of Mars came out into the open. It was a day's journey either way. But at one end there might be disappointment.... For the water at the oasis had been shut off for them the same might hold true at the next place. Lafarge felt quite sure that there would be no attack now. The storm had seen to that.

"Well," said Kildeer. "We've got our walkie-talkies. If things get bad we can call Captain Haynes and have him send help."

"We'd have to wait till the Captain contacted Meso," Lafarge said. "He doesn't have enough men at the fort. And help from Meso might not arrive for a couple of days...."

"Could I ask a question, Corporal?" a man named Sellers asked.

"Shoot."

"Just what sort of mission are we on?"

"I think the pipeline in the desert is being tampered with. Something is wrong there, I'm sure. Do you know why Sido and his friend fought yesterday?"

They shook their heads.

"... Because the other man showed a something from his pouch to Mowee, the cafe owner. I saw it. It was a piece of fused sand. A piece about a foot in length. It looked as if a fire of intense heat had been laid down its length. If there is a break in the pipe some of that energy is being lost. And if the break widens it would be impossible to say what the result would be. But I can say this much. This whole planet would become a mass of molten flame, if all the energy escapes. I feel sure it becomes combustible on contact with the air. And I feel sure Sido, Mowee and others know of the leak. But these damned green monsters haven't the scientific knowledge to figure out the calamity which might follow. They might reason that if they enlarge the break or leak it would be sabotage and a means of vengeance. So we might have to fight the green boys and fix the break or leak.

"That's why I picked you men. You're all construction-unit men. And that was why the second truck is filled with equipment."

"Does the Captain know this, Corporal?" Maloney asked.

Lafarge shook his head. Perhaps he had been wrong in not telling Haynes. But he knew what would have happened. Haynes would have contacted Meso. There, it would have had to go through routine and red tape. A week might have gone by before an inves-

tigation would have taken place. A week might be six days too long....

"No, he doesn't. Now the cat's out of the bag. This is my idea. And if it's as bad as I think we'll have our work cut out for us. What's more, there won't be any medals or honors in store if we do succeed, because there isn't going to be a report except that we found and repaired a leak on pipe No. 9. So talk up now."

One by one the men stepped forward and shook Lafarge's hand. There was an odd trace of wetness in his eyes as he gave the command to proceed....

THE HILL was not sheer and it took but a half dozen bounds to reach the top. Each man held his machine pistol at the ready, the long grip-container holding a hundred of the tiny needle-like explosive shells. The pistol was calibrated so that each press of the trigger let loose ten of the tiny missiles.

Lafarge, first to the top, fell flat on his face. His men did likewise. He peered over the edge down at the busy scene below. Pipe No. 9, like all the other pipes, was a mile wide and rose some ten feet above the surface. But now they saw what they had never seen before. How deep the pipe had been buried. The excavation around it was fully four hundred feet deep and extended beyond the edges of the pipe for a distance of fifty feet each way. Thousands of the green giants were busily engaged in digging below the pipe. But what took the attention of Lafarge and the others were the strange creatures standing about, watching the green men dig.

They were things out of a nightmare. There was no torso, no legs or arms, just a gigantic bald skull and crab-like tentacles on which they

scuttled back and forth along the edges of the excavation.

"Kildeer!" Lafarge whispered. "Contact Captain Haynes! Quickly!"

Kildeer worked the walkie-talkie for several seconds, raised the fort and started to send his message through. Instead, Lafarge saw his face go pale as he listened in rapt attention to the receiver.

"The fort's being attacked," Kildeer announced. "Captain Haynes is asking Meso for reinforcements. A couple of thousand of the green goons are trying to get in...."

Lafarge pounded a fist into a palm. It was clear as crystal now. These monstrous things below; they had something to do with the attack on the fort, with the suddenly insolent and cocksure attitude of Sido and his friends, with the sly looks Mowee had sent them as they sat in the cafe. But who were they, and what did they want?

"What'll we do now, corporal?" Maloney asked.

What was there to do, Lafarge wondered. There was no place to retreat to, no water, and they couldn't attack. The whole thing was taken out of his hands in very short order. For suddenly some of the crab-like monstrosities stopped their scuttling and paused in listening attitudes.

Something was said, some message given, for immediately all activity ceased. And like avenging angels the green men swarmed upward toward the small group at the top of the hill. There was no need for hiding now. An odd feeling of relief broke the despair around Lafarge's heart. Action! That was what they needed. Fanning the machine pistol slowly before them, Lafarge let loose a stream of explosive needles at the oncoming horde. It was the signal for the rest of his men to

follow. The green men died by the hundreds in the first wild rush. But now the other creatures took charge. The next wave of green men did not come charging wildly and straight up. They came, some rushing forward, while others fell to the ground and crawled, to suddenly come erect and charge a few yards, only to fall on their faces until they had a better opportunity to advance.

Had the hill been higher the green men might not have made the crest. But some came through on both flanks. Lafarge detailed four of the squad to cover the others with their fire. He and the rest continued to pour their shots down at whatever they saw.

Suddenly Ryerson, one of those on cover, shouted:

"Corporal! Those bloody goons are wrecking our trucks!"

Lafarge leaped to Ryerson's side and peered down to the spot where the trucks had been left. Ryerson was right. For suddenly twin bursts of flame spouted from the trucks.... The die had been cast. There was no retreat now. They were finished.

THE EIGHT Earthmen were shoved forward along a wide and level path which led straight between the center row of girders. And though they did not see them, they could hear the shouted directions of these strange beings. And at last they arrived at the strangest of all places.

It was a vast crypt, extending for miles. Countless little chambers were to be seen. And sticking out from the nearest of these chambers were the huge heads of the strange beings. The gloom was not so intense Lafarge could not make out their features. Oddly, he found their faces showing every sign of advanced intelligence, with high wide foreheads, and bright

intense glance. Their mouths, noses and ears were small by comparison to the gigantic skull, but it was to be expected.

Lafarge wondered suddenly how he and the others had heard their voices. And the nearest of the skulls answered, in rather mild tones:

"Voice projection, through the medium of extrasensory perception. All beings, human and animal, have it. We have merely made a science of it."

"And also mind reading," Lafarge said.

"In a mild way. It really isn't necessary. Humans react according to a formula, depending on environment, mental state, and exterior influence. For example, let us take yourself. I called upon you to surrender and immediately you thought that surrender would give you another lease on life. And it did. But one which we can lift at our own discretion. Therefore act with reason and intelligent foresight and all will be well. I address myself to you because it is obvious that you are the leader, both in the status of your calling, and mentally so. Do I make myself clear?"

"Yes. Very. If we don't do as we're told, death will come to call on us."

"I would have phrased it otherwise. But the idea is as stated."

"Well, since this is conversation, mind telling me who you people are and what is behind all this?"

"Not at all. A most reasonable request. We are the Liktil. The last of the cultured races which lived on Mars when it was a planet which held life. But we knew that someday life would end on the planet. And so we sought to prevent it or subvert it to our ends. So we discovered that we could do so, but not in our lifetime thought it was great, compared to yours. Let me see, a measure of Earth time is a hundred years, I believe....

Well, we found that in a hundred thousand times a hundred years the energy we let loose within the walls of this vast tunnel would reach the stage at which it could be harnessed. But we wanted to be here when that stage was reached. A rather difficult problem. This is the result of a vast program of research. Each of us was injected with a liquid which our scientists discovered. It was first injected into organisms which could live a hundred thousand times the period specified and still be observed. If it worked and they came out of the cataleptic state then we knew it would work with us. And as you have seen...."

Lafarge threw his hand out in an all-embracing gesture.

"And all these tiny cribs contain people like yourself?"

"Yes! A million of us. The Liktii were the greatest of all the races which lived on Mars. These green beings now living here are, at best, beasts. But we can utilize their strength in the work which must be done."

"And what about the pipeline?" Lafarge asked.

"Well, what about it?"

"Do you know it is being used right now? And for about the same purpose? By the peoples of the planet Earth?"

HAD THE Liktii eyebrows, Lafarge was certain they would have lifted. Only the voice became more unctious: "All this was taken into account. We realized that the scale of evolution would produce a thinking, inventive being on your planet. For it was very similar in structure to ours. And we even provided for that emergency, should it arrive, and we found on our awakening that Mars was occupied by the peoples of another world. For example, we knew we would be in need of workers. There

was but a limited supply of the master liquid, enough only for, well, for us.... So we planted the seed which became after the many thousands of years the green race you know. And within the soul of these things we produced by artificial means, we planted the germ of memory which would never let them forget we were the master race. I will say that there was not a thing left undone."

"No, there wasn't," Lafarge agreed. "Except maybe the fact that the world of the Earth produced creatures a bit different from yourselves. Perhaps in the eventual evolutive scale we would evolve to a state approximating yours. I can safely suppose so. But the one factor you might not have considered—the personal one—might make a vast difference in your plans."

The Liktii's voice rose an octave: "Personal factor? How do you mean?"

"The peoples of the Earth feel that these pipelines, these vast tunnels which contain pure energy, were a discovery of theirs. And that by right of discovery they belong to them. Are you prepared for war...?"

"The probe of your words strikes deep. And I will answer. It isn't a matter of argument, nor a question of rights. These tunnels were built for us, *by us*, to provide a new life on a planet revitalized by the energy now contained in these tunnels. They belong to no other race, of Mars or any other planet. Nor will we consider any prior rights. There are none. either of discovery or conquest! Do I make myself clear?"

"Perfectly," Lafarge said. "And is the attack on Fort Allen a physical symbol of your coming to power? Will you attack the large garrison at Meso?"

"We will rid ourselves of all and

any foreigners, on Meso or at any other place on Mars. Here! Come along, Earthman...."

LAFARGE followed the crab-like creature scuttling along before him with mixed feelings. Part of it was revulsion, and part wonder that what the Liktii had told him could be and was, probably, true. The Liktii had given orders that the green men stay by the others of Lafarge's command. He knew Lafarge wouldn't attempt escape. The man had too much curiosity, too much desire to learn. And the Liktii was right. Escape from the depths of his prison, Lafarge realized, was not a matter of the moment. And certainly not of this moment.

He must get the facts the high command must know before an expedition could be arranged.

The way led downward in a long and steady slope. Lafarge noticed a peculiar physical occurrence. As they descended the way became lighter, as if with an inner luminescence, until at the end it was as if they were walking in soft sunlight. But there were no shadows.

Then suddenly they were at their goal.

Lafarge's breath seeped softly from between his lips. A whole city had been built in this vast underground place. It shimmered in a soft haze a long distance below. He could not make out any of the fine details, streets or houses, but he saw enough to tell him it was a city which could hold a million people.

"The city of the Liktii. This is where we will live and rule. And there... Look!" the crab-like thing pointed with one of the monstrous pincers toward the circular walls before them.

Lafarge looked downward and saw

the tunnel mouth directly below. It was closed and sealed.

"Soon it will be opened. As soon as our scientists awaken from their sleep. Already the green men of Mars are alerted for the task before them. And as soon as the Earth race has been eliminated they will make their pilgrimage to this place and start their last task."

"Their last task...?"

"We will have no need of them, after it is done. Elimination will be a simple matter. The Liktii will rule supreme then, which is as should be."

"But I thought it was with the outer atmosphere you were concerned," Lafarge said hesitantly.

"A foolish thought. It would be impossible to stay the work of nature. Mars is an old planet in the table of time. The life which can be lived on it must be lived *within* it."

"Then why worry about those above?"

"The tunnels gain their life from the solar matter above. There are minute openings in the walls. These openings draw in the sustenance we will need. There must be no living being on the surface. For it should be obvious that no chances must be taken. The tunnels are the veins which carry our life's blood. They must not be allowed to be interfered with in any way. Just as you would not want your veins constricted for any length of time."

"BUT WHAT is the reason for digging around the tunnels as you have?"

"In a very short time the awakening of our scientists will take place. We are preparing the ground for them. I spoke of minute punctures in the tunnel walls. They will be enlarged and a certain amount of energy will be permitted to escape; enough to kill

every living being on the surface...."

Lafarge didn't have to hear more. Already he was seeing in his mind's eye the carnage of such a step. But were the Liktii mad? Hadn't they thought of the inevitable consequences? Should enough of this wild energy "escape into the atmosphere a larger calamity than the mere killing of lives might ensue. He wasn't enough of an astronomer to know with certainty, but Lafarge had a rather more than vague idea that the whole planet might be thrown off course, which would lead to the probable death of the entire solar system!

He and those with him had to escape!

He erased the thought the instant it crossed his mind. His face was blank and his features bland as they walked up the long grade to where his friends waited his return with impatience. Lafarge looked up, startled, to see the giant Sido standing with a group of friends. The green man was laughing loudly, boasting of the great deeds he had done against the pygmy Earthmen....

But the Liktii saw nothing humorous in the talk. His voice was sharp, questioning:

"What brings you here? Are the Earthmen eliminated?"

Sido turned an insolent countenance to the Liktii and stared down at the thing with grinning eyes and lips. It was obvious Sido was drunk. And not alone on power. The fiery liquid he had drunk had taken away what little senses he normally possessed. Now he was operating on reflex alone. Lafarge could almost see the minute brain work.

But Sido forgot that the Liktii possessed a power he didn't. The power of mind-reading. The Liktii's voice was silken, like the glove which shields the steel fist:

"Sido has served the term of his usefulness. I asked him a question. Was his bravery so great he is still filled with it?"

"The fort was taken," Sido said. His voice was surly and he turned his face so that the thing could not see his eyes. "They were lost beneath our numbers like the face of the sun when the sand storm blows strong. What need was there for me to remain?"

"Did Sido have his fill of blood that he left before the last of the Earthmen met death beneath the blades of the green warriors?" the probing voice demanded.

"Sido left when he felt like it!" the green man suddenly stormed.

There was a moment of silence, a moment Lafarge weighed strongly. Their lives might depend on his decision, *would* depend on it. And he had to be as sure as it was possible to be, before he acted. He turned his glance from Sido to all the other green men in the range of his vision. It was fairly even; there were as many defiant as subservient. Lafarge made his mind up then, and acted.

"Is Sido a *feesta* that he must act like one?" Lafarge asked with deep irony. A *feesta* was a loathsome worm which infested some parts of the only tropic section of Mars.

THE GREEN giant whirled on Lafarge. "I am a man!" he growled. "Give the Earthman a sword and not a pitting iron and I will show him how much a man I am."

But the Liktii was not going to wait for the play to come to a climax. "Cut them down!" he screamed. "Quickly!"

"We are with you!" Lafarge howled as he motioned for his men to join the fight which was going to start. "At 'em....!"

Sido was slow in thought. But there was nothing wrong with his reflexes. "To my side!" he bellowed. "Kill the Liktti!" His sword fairly leaped from its scabbard and plunged down at the huge head. There was a sound of bone breaking as the huge skull was punctured by the terrible power which Sido wielded. And a spurt of red blood shot out from the gaping hole. The horrendous creature rolled down in the gutter alongside the crypts. But on the instant, as if the signal for battle had awakened them, the crypts opened and scores of the things came out.

As Lafarge had figured, the green men were divided. Of the five or six hundred half were with Sido. The trouble was there was no time for planning. Green men leaped on green man while the Liktti screamed imprecations at their enemies.

Lafarge too went into action. His little frame was deceptive. It did not look as if it were packed with dynamite. But every inch of the man was power. Even before Sido gave full voice to his battle cry Lafarge had gone into action. Leaving his feet in a tremendous leap of fifty feet, he jumped over the head of the nearest green man who fought on the side of the Liktti and as the green one turned, bewildered, Lafarge struck at him from behind.

The blow caught the green man at the back of the neck, breaking it as effectively as if it had been done with an axe-head. And Lafarge caught the long sword before it reached the ground.

The green men were huge, muscular, trained to the use of the sword. But never did they see such swordsmanship as Lafarge showed. He was lightning. He leaped and skipped, never still for an instant, and his sword licked in and out with fantastic speed. Man after man fell before his

swift lunges. Even Sido, busy as he was, felt a throb of wonder and awe at this pygmy who slashed and stabbed so swift the eye could not follow.

But though Lafarge held the touch of wizardry in his swordsmanship the same was not true for all of his small force. Two of them died helplessly before they could gain a weapon. And two more were caught in the web of death the swords wove. Only Kildcer, Maloney, one of the Smiths and the Englishman were left. They followed Lafarge's lead as best they could, leaping as he did, using their superior speed, agility and the lack of gravity to the best advantage. But they were not swordsmen. And one by one the enemy found them. Yet the death wound was not given them.

Lafarge found himself at Sido's side. The giant grinned down at the smaller man, and though the green fluid flowed from several cuts, his grin was as wide as ever, and the voice was as strong and insolent:

"How better to go down, Earthman? The taste of blood on the

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sword point makes the next slash surer. . . ."

Lafarge could not help but admire the giant. Sido did not know the meaning of fear. Perhaps it wasn't a virtue, but in this case it was of great help.

"To the surface!" Lafarge grunted as he parried the clumsy blow of an enemy and sank his own blade to its entire length in the chest of the man. "We stand a better chance there. . . ."

"True," Sido said as he whirled his great sword in a curving stroke which sliced an enemy's head from his shoulders neatly. He raised his voice in a wild chant: "*Upside, men! Upside!*"

BUT IT WAS not to be done easily. The only way to the top was by means of the ladders. And there were too many of them. Lafarge saw the only way out. They had to take the chance.

"Use just a few!" he shouted. His voice was hoarse from shouting, but it was the only way he could make himself heard. The clash of blade on blade made a clamor above which a shout alone was possible. "The first two ladders."

And once more the Likti tried to circumvent their escape. They had lost quite a few, for often as not Sido or some of his men would trap some of them and slash them to bits. But many escaped. These hid deep within the crypt-like vaults and tried to make their voices heard. Fortunately for Lafarge and the others their voices were too weak and they had to come into the open. There they took the chance of being caught and killed. Lafarge heard their shouts for the green men of their command to use all the other ladders. It was going to be a race.

Lafarge and Sido were first to reach the ladders.

"I and my men will stay and see to it you and the others get above," Lafarge said.

But Sido, with an easy sweep of his hand, shoved Lafarge up the first rung of the ladder and laughingly said:

"No. Get the spitting irons and cover us. We'll take care of the others down here."

There was no time to argue. Lafarge motioned for his men to follow and scrambled up the steep flight of iron rungs. One by one the others who were left of his command followed. They reached the space above and gathered wearily about Lafarge. He turned this way and that in search of the rifles they had been forced to drop. They were nowhere in sight. And already the first of the enemy was coming from below.

"Kildeer," Lafarge ordered, "take Smith along and see if the fire got everything. Try to salvage one gun anyhow. . . ."

The two sped off in great leaps up the side of the high earthwork. Lafarge and the two other ran for the nearest spot where the green men were already coming up, and slashed down with their swords. The dead tumbled backward, carrying those immediately behind to their deaths. But there were too many ladders.

And once more the fight was carried on from where it had left off below. But now there was a little more room for maneuvering. And Sido and those who were left of his followers came up. These formed a tight ring which moved with inexorable force to the side of the breastwork. And step by step they mounted upward, fighting every inch of the way. Now and then a man fell out and was slashed to bits by the blood-crazed enemy. Lafarge felt a great weariness and knew his time was not long. It was not in the nature of things to continue this wild

hacking and slashing without pause for breath. What was worse, he and those with him had had no water for a full day.

That problem was not with Sido and his men. They could go, and often did, without water for as long as a week. So they fought with unabating fury. Not so with Lafarge, Maloney and the Englishman. Their arms ached intolerably and to merely lift them took more strength than they felt they possessed.

Yet to stop meant to die.

LAFARGE fell back, his last strength spent. There was an open space into which they had fought and he stood, like a tree in the forest which had just been cut through by the forester's axe, ready to fall, and looked through a haze of blood at the scene about him.

The Englishman, Jonesy, lay on the ground a few feet away. His right arm had been hacked off at the shoulder, and his body was pierced by a dozen wounds. His face was almost cut in half and he was covered by his own blood from head to toe. Lafarge turned to see whether Maloney was still alive. He was, but just. He was half lying, half sitting against the body of a green man. Maloney, too, had been wounded. But he was still alive! A tired grin forced its way to the pain-twisted mouth as their eyes met.

Lafarge raised a shaking hand in a gesture of triumph.

For he had seen that their sudden maneuver had broken the wedge. Sido and his men had rushed in and were now tearing to pieces the remnants of the wedge.

Now they were a hundred feet away, seventy-five, fifty, and Lafarge raised his sword up. He could see their yellow eyes hungering for his



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blood. Well, he thought, come and get me. But before you do there'll be more than one of you that will go down with me.

A look of bewilderment crossed his features suddenly. The entire first rank of them simply fell to pieces. And behind those, the second and third waves broke into bits. Then and not until then, did he hear the sound of firing from above. He whirled and saw Kildeer and Smith seated high on the hilltop. Between Kildeer's knees the long snout of the heavy machine gun was thrust. And Smith kneeled and fed the long belts of ammo into it while Kildeer worked the gun in a slow fanning motion from right to left....

SIDO STOOD before Lafarge and waited. Below, the field was cluttered with broken bits of human flesh. Rivulets of green slime had gathered in pools here and there and gleamed wetly and horribly in the sun. The long edge of the excavation was bare of life. Beside Sido stood the thirty green Martian warriors, all that were left of the several hundred who had thrown in their lot with him.

Sido's eyes still held their insolent look and his chin was as outthrust and be-damned-to-you as ever.

And this time Lafarge looked on the other with odd affection. It was like being faced with an old and tired fighter against whom one had fought time and time again, but always in open, above-board fight.

So Sido stood and waited the Earthman's decision.

"It's either us or they," Lafarge said. "Do not fool yourself. I have seen the underground city. The Liktii told me of their intentions. Not a single Martian will be left on the face of Mars; not a single Earthman; not a single being of any kind. For

they intend to release the energy in the tunnel-pipes...."

Sido's eyes wavered and moved from side to side suddenly. A small furrow appeared in his brow.

"...There was a small break in the pipe," he murmured hoarsely, as if in continuation of a thought. "I found it and saw what happened because of it. The ground itself was fused and brittle. I broke off a piece and brought it to Mowee. We knew then that the story of the Liktii might be true. Then I came back and saw the first one. I am a great warrior and never has one said of Sido that he knows fear.

"But that moment when my eyes were laid on the Liktii I knew fear. He made me know it, as one knows the cloak of death before it is laid on one's shoulders. I was told what to do and did as I was told. We worked mightily and after a while we made what your eyes saw. Then I saw the burrows where they were laid in. And the fear grew larger, stronger and heavier on my heart. But only of the Liktii!

"So we were told what to do.

"But now I will no longer be told what to do by these creatures that crawl! I am a man once more! And I will act like one...."

It was a long, a very long speech, for Sido. And it was the first time in the two years Lafarge had known him. The first time Sido had opened his mouth not to boast. There was a question Lafarge wanted answered. Upon the answer hinged the fate of perhaps the entire solar system.

"Sido...." he began.

THE GREEN giant looked down at this Earthman of vast courage and strength with a feeling of affection and admiration he had never

known before. They were not bad, these pygmy Earth creatures. At least they fought with courage, and now that he knew they could fight without the use of the spitting irons, his admiration was even greater.

"...Did the Likti show you how he fused the earth...?"

"Yes! There is a band below, a band of strange metal which opens. I know the spot. But the Likti opened it from some place I know not for it lay within the crypts."

"A band around the pipe?"

"I do not know how far around it goes, but I saw where it was opened."

Lafarge left his breath out slowly. Sido said the band lay below, which meant on the under side of the pipe. Good! They had but to open the band and let out the mysterious energy it contained. . . . He could almost see the result. The ground would be fused, sealed, and with it the crypts in which the Likti lay. Sealed forever! But it had to be done quickly. Lafarge feared these creatures. . . .

He turned and called to Kildeer and Smith to bring the machine gun. They did as he ordered.

"Okay! Let's take this thing below," Lafarge said.

Sido and his men followed the small group with the machine gun. When they reached the bottom of the huge pit Lafarge asked Sido where the band was. Sido walked forward and pointed it out. The Earthman looked up at it and grinned. It wasn't going to be too difficult. Just to get the proper angle, that was all. The heavy explosive shells would rip under the band and release the energy. . . .

"Set it up there," Lafarge pointed to the spot.

When it was set to his satisfaction and the belts of ammo placed in such a way he could feed it without

(Continued on page 127)

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READER'S PAGE

LETTER OF THE MONTH

Dear LES:

Recently I bought the August 1952 issue of **FANTASTIC ADVENTURES**. As usual, I awaited its arrival on the newsstand eagerly, and not without a certain amount of impatience. Now, having finished reading it, I am left with the mellow, satisfied feeling that usually comes to me on completing an issue of FA.

"Well, that's just fine", you, LES, might say. "But how about going into more details, chum?"

As one who is ready to oblige at all times, I will do just that.

First, of course, the cover by Walter Popp. Good—very good. Just a bit different from the usual ones.

Editorial. I enjoyed it, and agree with most that was said about Charles Fort. His humor was of the gusty variety. Listening to his every word with wide-eyed, slack-jawed intensity would, I believe, have caused him to double up with laughter. Never did he want to be taken too seriously. He did not take himself that way. At least, that is the impression I get from reading his works, which I always find as an exciting and stimulating experience.

Regarding the stories, I read the shorter ones first. Because I have taken a shine to Milton Lesser's sharp, crisp style of writing, I immediately started his contribution. "All Flesh Is Brass" was an excellent short, absorbably read. Grim.

Next choice: "Tomorrow's Shadow" by Arthur G. Stangland. Good, interesting. "The Yellow Wind" by Dean Evans was third. It, too, was a sound story, followed by Don Wilcox's "Mars Invites You", considered by me as fair, merely fair. This author's stories of some ten years ago were better, much better, than those he is turning out now. At that time his ideas were fresh, original, well thought out. I looked forward to his efforts, then, with keen anticipation. But now—well, his present stories just don't pack the wallop as did his former ones. Sorry indeed am I to say this, but it is only too true. Finlay's illo for "Mars Invites You" was the best in the issue.

And now we come to "The Man Who Lived Twice", by Rog Phillips. I read this novel on our national holiday—Dominion Day—on July 1st. Lying on the sandy beach in an attempt to acquire a tan, the sun shone warmly as a cool breeze drifted

in from placid Lake Ontario. My surroundings were perfect, and that's how the yarn struck me. Perfect. Hand it to Phillips to keep your interest at a high pitch.

In conclusion, I would like to say that I agree with reader William Wesley Miller in his remarks about author William P. McGivern's character, Reggie. I too found him highly amusing in the April 1952 issue of **AMAZING STORIES**, and chuckled throughout the story "The Man Who Bought Tomorrow". I am most happy to hear that McGivern will commence work on another Reggie yarn. Hope he makes it a novel this time.

Alex Saunders

34 Hillsdale Avenue, W

Toronto 12, Ontario, Canada

William P. McGivern's Reggie is slated for an appearance in the new FANTASTIC. Watch for the yarn. It's really something. It will be, in fact, the first of Reggie's many appearances to come. —Ed.

TRAVELING THERAPIST

Dear Mr. Browne:

Will you please print this in your next issue?

SOS—will any fan of any age, shape, size, sex, or social status in or around Jackson, Michigan, please contact me. I'm a Kansas University graduate, studying Occupational Therapy, taking three months' clinical affiliation at Jackson County Sanatorium. Be there July through October. Will be in Chicago October through December, Iowa City January through March, so would like to hear from anyone there—or anywhere.

AMAZING started me on a long and omnivorous career of reading fantasy and science fiction. It all started when I had the mumps, in the sixth grade, at the tender age of ten. Since then I've gone periodically blind and broke trying to keep up, and catch up. But it's all in a good cause, and I've met many interesting people and made many good friends through the field.

So please write to me, good people. Thank you.

Ellen Bond

Jackson County Sanatorium, c/o
Occupational Therapy Department
Jackson, Michigan

HERE'S THAT MAN AGAIN

Dear LES:

Maybe it's good; maybe it's bad; but here I am again. I feel very honored that you picked my letter as letter of the month for August. Thank you. That's why I'm here. I thought that, since you didn't object to the first one, maybe you wouldn't object to this one, either.

I enjoyed the August ish very much. Mainly, I suppose, because it had three of my favorite authors in it. Your mag gets better all the time. (Is it possible?) I have one complaint, though. WHY NO LONG NOVELS? About 70,000 words' worth. Publeese!! About one every other ish.

The cover was good, for Mr. Popp. I don't care for him much. He's like Mr. Summers, all right once in a blue moon. Of the inside illos, only the ones for "All Flesh Is Brass" and "Mars Invites You" tie for first; "All Flesh Is Brass" and "The Yellow Wind" come secondly; and "Tomorrow's Shadow" is a very close third. I think you really must have hit the jackpot in stories this time. Even more so than usual. Sometimes I enjoy the science shorts, but they kinda go over my head. I'm only 16.

Letters:

W. W. Miller: I agree with you completely about Reggie, but don't you have the wrong mag? This is FA, not AS. Anyway more Reggie, Editors.

R. D. McNamara: Ditto about covers. Also on "Soul Snatchers". Let's see lots more of Lee Francis. Hurray! Someone who agrees with me about "Let's Have a Little Reverence". Fairman can, and probably will, do much better than that.

A. Maddox: Shall we gang up on the eds and make them print long novels?

Well, keep up the good work and high standards of your mag. That's all this time.

Donald Honan
261 Harcourt Street
Long Beach 5, California

The duologies in our sister-mag, AMAZING STORIES, were well received by those who like long stories. Did you read them? —Ed.

THE MAN WHO COULD NOT DIE

(Continued from page 125)

too much trouble, Lafarge turned to the others and said:

"All right! Now back to the surface. Sido...."

"Yes?"

"Your word my men will get to safety. The break in the pipe must be sealed—"



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"My word," Sido said as he advanced and held out his hand.

Lafarge reached for the huge paw to shake it. And Sido struck. Lafarge was knocked backward away from the gun. Nor did he stir as he hit the earth. Kildeer and Smith started forward as the blow was struck, but stopped at the broad grin on Sido's lips.

"Take him upside," Sido said.

"This, what must be done, is my work. We were to be made slaves. I have seen how the spitting iron works. The job will be well done, tell my friend..."

"DAMN IT!" Lafarge said. "He was a man. Green or otherwise, he was a man!"

Kildeer and Smith nodded gravely. Sido knew there would be no escape. As the earth would be fused by the escaping energy, so would human flesh, nor would color be a bar to the death which would burn....

Lafarge took a last swallow of the precious water, wiped his lips with the side of his palm, and motioned them onward. They turned and waved to the green man who stalked off across the desert. And the three moved slowly on to Fort Allen.

Kildeer spotted the flag first. Sido had said the fort was taken. Surely the flag would have been torn down.

The wide gates were swinging open...two battle trucks pulled out...and the three started a wild race to see which reached the trucks first.

CAPTAIN HAYNES grinned broadly up at the three bedraggled men who faced him.

"...We wouldn't have had a chance if it weren't for this Sido. As it was he was sorry that the gate guards had to die. And when I told him that you had gone out to in-

investigate something he knew what it was. He told me to get reinforcements from Meso as quickly as possible. Then he turned and dashed out of here."

"So he knew it all the time and intended to get the Likii," Lafarge said in a low voice.

"This Sido admired you greatly. Said if all Earthmen were like you he would not mind."

"He admired me," Lafarge said softly, gently. "And I thought him a fool, a braggart. And all the time he was planning to help. Captain may I return to the place from which I have just come? I think that it would be only fitting that the place of his sacrifice should be made known."

"The corporal's request is granted." Captain Haynes said softly....

THE END

IDEAS MAKE THE DIFFERENCE

Walt Crain

EVERY NOW and then some embryo engineer contemplating the state of things groans and says, "What's the use of thinking?—everything's been invented—it's too hard to think up a new idea—all you can be today is a slide-rule-and-hand-book engineer". This familiar plea that there's nothing new under the sun and what's the use of thinking is as old as science itself—and it's completely false! There are a million ideas floating around, waiting to be grabbed, ready to change the face of technology and science.

There is a particularly splendid example of this method of bringing a new idea to an old art in the recently invented method of using cooling fluids in lubricating machine tools. Anyone who has ever watched a machinist work a bar of metal in a lathe must have noted the standard practice of allowing a cooling fluid to drip over the point where the tool cuts into the metal. This method is as old as the lathe itself and has been applied with very little change for the past hundred years. One of the limitations on cutting metal depends upon this: you can't cut faster than you can cool, be-

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cause the tool loses its temper and its edge. So machining speeds are limited.

But some clever engineer recently re-examined this standard procedure—and no doubt was laughed at at first with "We've always done it this way, so why change?"—and decided to change it. Instead of allowing the cooling and lubricating fluid to run down over the metal piece and the tool, he pumped it in a fine thin jet directly to the point at which the tool bit into the metal from below! The result was that the cooling fluid was forced right into the point where it did the most good, enabling speeds to be multiplied and producing much finer work. Right now it's being used everywhere and it promises to be the standard method of the future!

Such a humble, simple change could have occurred to anyone—but it didn't. It occurred to the man who examined a familiar phenomenon with a critical, analytical eye, asking himself, "Can this be improved?" And so it goes with a million ideas. Just think, question, revise, and you may very well change the future—it's being done every day!

ATOMIC ROCKETS ARE A MUST

By Marianne Wynn

EVEN SO notorious an authority as Willy Ley concedes, despite his enthusiasm for rocketry, that at the present state of the art, as well as that of the foreseeable future, flights to and from the Moon are not possible—with chemical fuels! In a recent article he pointed out that atomic energy must come to the rescue.

With chemical fuel, a rocket, unmanned and with an explosive indicating charge, could be put on the Moon. Possibly even a satellite station could be built in space. But chemical fuels simply do not have the necessary energy to permit overcoming the Earth's gravitational field with the amount of fuel a rocket could conceivably carry. Those are the cold, simple facts. Willy Ley admits them rather despairingly and hopes to see the atomists get to work.

But the application of atomic energy to rocketry, even by the most generous standards, is still a long way off. The atomic art is still in a relatively primitive state, requiring immense research and industrial development before it becomes practical enough to apply itself to any kind of vehicle other than the massive ships, submarines and gigantic airplanes which seem in the offing.

(continued from second cover)

lish course because it interfered with basketball. My English teacher passed me—finally—but only on condition that I work on the school paper for a semester, to get a working knowledge of my language.

I've been associated with editors ever since, either being one or writing for them. I've written at least two million words, most of it science fiction, although I have tried my hand at—and sold—a western, a war

story, and several love stories, to top markets. Most of what I've written in the last year has been for radio and television.

AMAZING STORIES and FANTASTIC ADVENTURES, where I got my first real writing boost, have been—and will always be—very close to me.

There have been rumors in the science-fiction field that I am only a penname for various well-established writers. But this is not true. Believe me—I'm real.



Omar Booth

As the editor of a leading technical magazine, I have access to a great deal of information that is not easily available to the layman. And being interested in this type of writing, I never need much encouragement to write several articles each month.

I don't know much about science fiction. I only know the actual technical equations and formulae which make certain scientific facts possible. This is what I try to put into my articles. Each one is always based on studied research and fact. In my field, there is little room for a mistake.

I live alone, in a one-room pullman-kitchenette apartment on Riverside Drive, in New York. I can't imagine living anyplace else in the country but New York. I like to travel, but like even better to return home.

In Your Mind's Eye

The Secret of MENTAL CREATING

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All things begin with thought—it is what follows that may take your life out of the class of those who hope and dream. Thought energy, like anything else, can be dissipated—or it can be made to produce actual effects. *If you know how to place your thoughts* you can stimulate the creative processes within your mind—through them you can assemble things and conditions of your world into a happy life of accomplishment. *Mental creating* does not depend upon a magical process. It consists of *knowing how* to marshal your thoughts into a power that draws, compels and organizes your experiences into a worth-while design of living.

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